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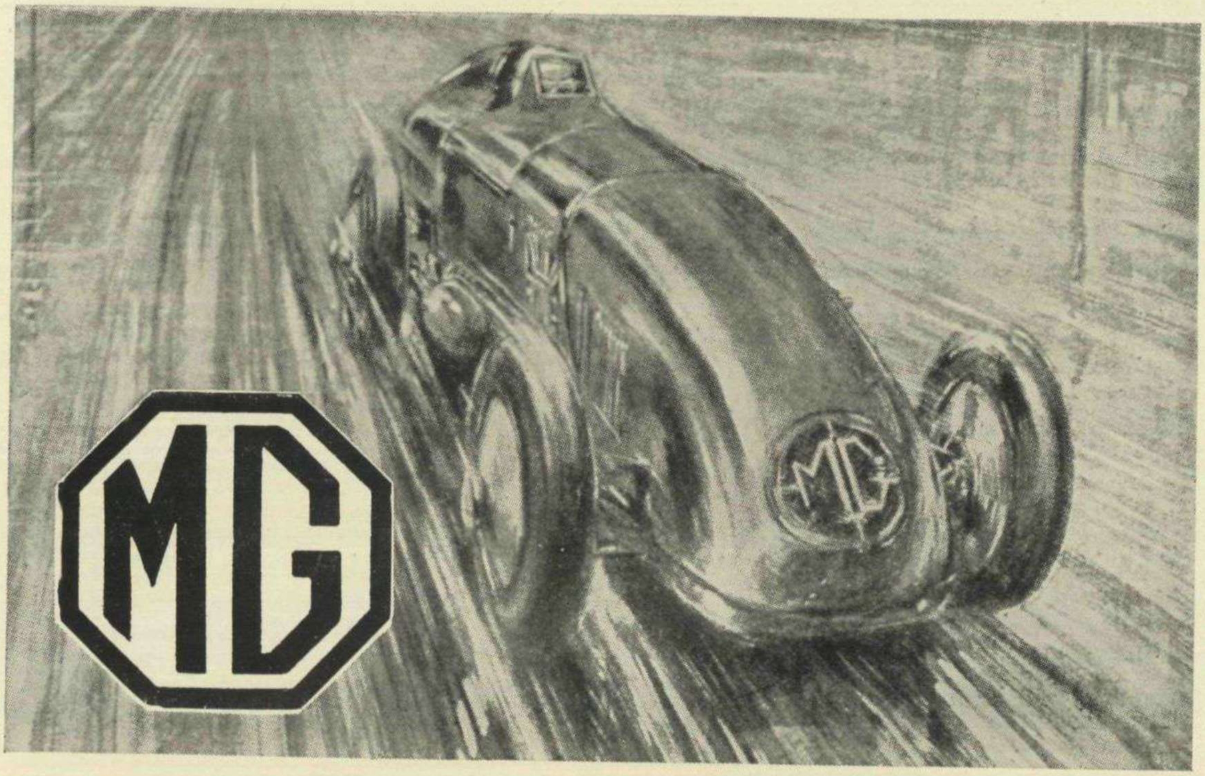

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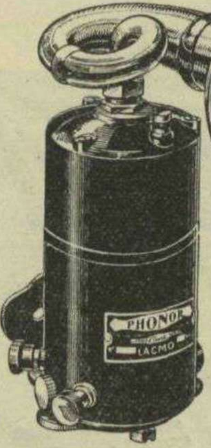

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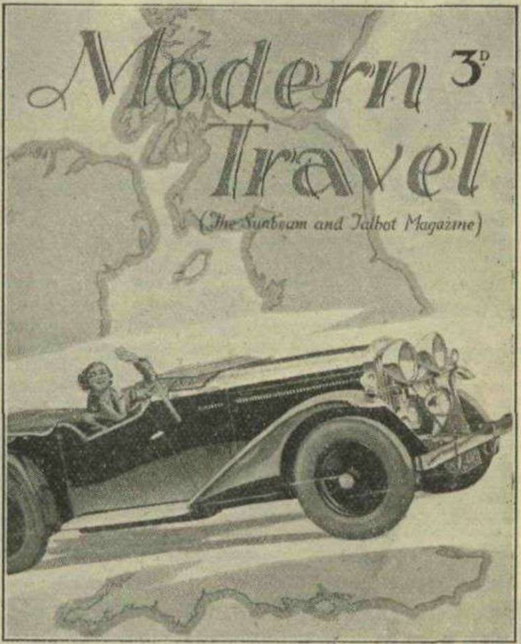

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EDITORIAL.

THE M.C.C. DECIDES.

THE M.C.C. are in future going to ban the use of competition tyres in their trials! This news, suddenly announced a few days before Christmas, gave rise to much heated discussion during the holidays whenever motor-sportsmen met, and now that the first fury of the battle is over a brief survey of the position may help to clear the air a little.

Take the two opposing schools of thought. First, those who are against the use of competition tyres say that they serve exactly the same purpose as chains, which have been banned long ago. This appears completely logical, but it is only fair to point out that the holders of this view are in many cases the drivers of small, light cars which can gain speed sufficiently on the lower slopes and corners of a hill to enable them to keep going over a slippery stretch. The strongest members of this section are, of course, the owners of cars with a solid rear axle, which are practically immune from wheel-spin and therefore have no need either for chains or special tyres.

Now for the other side of the picture. Those in favour of competition tyres claim that in this way they are able to put their heavier cars on more level terms with their rivals. They contend that without "comp." tyres certain hills, such as Iles Lane, are definitely unclimbable, when wet and muddy, with anything but a special type of small sports car, and that unless trials are to degenerate into events for this form of motor-car alone, competition tyres must be allowed.

The result is a deadlock. Each side, it will be seen, is influenced by the type of car which its members drive. The former, being able to dispense with competition tyres, would like to see this advantage given the fullest recognition. The latter do not see why all types of cars, intelligently handled, should not be allowed to stand an equal chance of success, and they object to a feature like the solid axle (a principle which is not suitable for large cars) being placed at such an advantage.

It cannot be denied that competition tyres have gained ground as a result of Man's incurable urge to dodge regulations. "If we are not allowed to put chains on our tyres, we will have tyres which have knobs on already," seems to be the spirit, and as such must be discouraged.

The obvious solution to the problem is that the necessity for chains or "Comp." tyres should be removed by the elimination of all hills which without their aid are impossible to climb. This is a tall order, we know, but its partial accomplishment is at any rate possible. The weather is unfortunately the deciding factor in many cases, but hills which are only formidable when wet might well be avoided. Modern sports cars, with a well chosen four-speed gearbox, can surmount most gradients, and a general tightening of stop and restart, acceleration and braking, and timed section tests, appear to be the best means of deciding awards.

The position of reliability trials has steadily become more confused in recent years. Dissension is rife among competitors as to the fairest tests which should be included, and we should like to congratulate the M.C.C. on bringing the matter to a head. If fine weather prevails during the Land's End Trial at the end of March, the competition tyre controversy should be finally settled.

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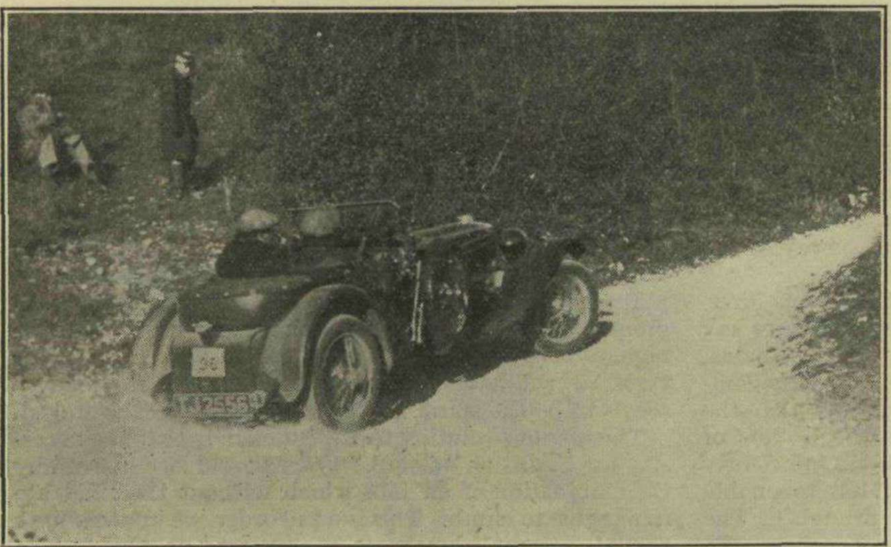
ALL IS NOT GOLD .....

DRY WEATHER MAKES THE "GLOUCESTER" HILLS EASY, BUT THE BISMORE ACCELERATION TEST CAUSES MANY FAILURES.

A FEW years ago the London to Gloucester Trial had a reputation of the most fearsome character, its route meandering up and down the muddy Cotswolds to such an extent that the gaining of a premier award was a real test of both car and driver. Note the word "muddy," for it was the slippery surface of these hills that proved the undoing of many drivers. Bearing this in mind, the jubilation of competitors this year was easy to understand as they contemplated the crisp, frosty night of December 9th. "Iles Lane," they said, for example, "will be easy to-morrow, and so will Ferris Court, and Nailsworth Ladder." True, perfectly true, agreed the wily officials of the North-West London Motor Club, and let their thoughts dwell on the acceleration test on Bismore !



One of the most consistent performers was J. Tweedale (Frazer Nash), who won the President's Cup. Here he is on the first hair-pin of Ferris Court.

But first things first, so let us return to Staines, where at the Bridge House Hotel one hundred and ninety drivers were checked out at minute intervals, N. H. Cole (Singer Nine) being first away at 12.14 a.m. The night was bitterly cold, the North-East wind chilling everyone to the bone, especially the inactive passengers. Fortunately, the N.W.L.M.C. believe in making their night-sections as eventful as possible, and the first hill—Maiden's Grove—was soon reached.

Maiden's Grove used to be considered quite difficult, but only nine people failed this year. The chalk surface was frozen hard, but even so the following drivers all came to an ignominious standstill :—

R. A. Hannam (Austin), H. J. O. Ripley (Riley), E. G. Wash (Ford), C. T. Bruton (Austin), T. Wagner (Triumph), C. C. Bliss (Windsor), C. V. Mills (M.G.), Lord Avebury (Ford), J. A. Driskell (Ford).

Over-gearing was the most general cause of failure, for the restarting point was placed on the steepest part of the gradient.

Nearly three hours after leaving Staines, the cars arrived at Chipping Norton, where a pause for hot drinks put fresh life into the numbed limbs of competitors. The stop came at an opportune moment, for soon afterwards the Restart Test on Old Stanway required plenty of skill and presence of mind on the part of drivers in order to accomplish the scheduled covering of 20 yards in 8 seconds.

The gradient was 1 in 6, so that cars with low bottom gears and well-tuned engines were at a decided advantage. The honour of making fastest time out of the 190 entrants fell to J. A. Elliott (M.G.), Miss C. Labouchere (Singer), and M. H. Lawson (Singer), all of whom recorded the time of 5 seconds. Only one-fifth of a second slower were W. H. Haden (M.G.), C. Mackenzie (Singer), and A. S. Whiddington (Frazer Nash). Another fifth separated these three from G. H. Robins (M.G. Magna), C. Ree (Singer), and Dom Impanni (M.G.). T. E. Price (Singer) and D. A. Loader (Singer) clocked 5 3/5ths, and A. D. Taylor (Riley) 5 4/5th. Seven Singers out of 13 cars !

Of the failures, G. May cast a blot on the escutcheon of the "N.W.L. Alvis Team," Miss Allan's Bentley suffered from the usual over-gearing trouble, H. J. Ripley and H. C. Hunter were unusual failures, and C. H. Wagstaff's Donington "Leaf" asserted the fact that it was out of its element.

Kineton is preceded by a water-splash, but the hill itself was quite dry. The majority of competitors had little difficulty in coping with Kineton, but some of the 13 failures were well-known trial drivers, such as A. Negal, whose M.I.N. Special looks as though it might have been developed from the Morris Major he drove of yore, R. J. W. Appleton (Riley), C. A. H. Cann (M.G. Magna) one of the few conquerors of Litton Slack in the recent M.C.C. Sporting One Day Trial, M. H. Lawson (Singer) and W. B. M. Fraser (Alvis), who was the only man to get up "Cab" Calloway in the Inter-Varsity Trial.

From 5 o'clock until 9.30 a steady stream of competitors arrived and departed from the Cadena Café at Cheltenham, where breakfast cheered up those who had already lost their chance of a premier award, and put new determination into those who hadn't. Already the field had thinned a little for D. West had found the trouble with his Frazer Nash was not of an immediately remedied nature, Appleton's Riley and Hess's Midget were suffering from engine trouble, and I. F. Connell (Ballot) and C. V. Mills (M.G.) also failed to report for duty.

After a time-check at Bull's Cross came the evil Acceleration Test on Bismore. Cars had to be restarted on a gradient of 1 in 6, and then accelerate for 50 yards in not more than 12 seconds. Last year the standard time was 15 seconds, if we remember rightly, and the extra 3 seconds proved the last straw for all but 43 competitors. Of these, we noticed outstandingly good performances by the following :—R. A. Macdermid (M.G. Midget), C. Mann, on a 1934 Ford V8, G. M. Denton (24 h.p. Ford), H. Laird (Wolseley), Miss Doreen Evans (M.G. Midget), K. D. Evans (M.G. Midget), P. Lees (Frazer Nash), R. E. Tongue (Aston Martin), H. P. Peaty (Frazer Nash), J. E. Tweedale (Frazer Nash), C. E. C. Martin (M.G. Magna), J. D. Barnes (Singer), and C. H. Wagstaff (Lea-Francis).

This sobered people down a good deal, and reminded them that a dry surface is not everything. The next hill, Mutton, added to the troubles of 23 drivers, but was not nearly so difficult as last year owing to the corner at the bottom having been widened. The Singers were good as a whole, as were the M.G.'s and Frazer Nashes, but the Bentleys driven by Miss Allan and F. E. Elgood both failed, as did F. R. Gerard (Riley) and D. C. Cory (Riley).

Quarhouse produced fewer failures than any other hill of the trial, for R. S. Hdogkinson (Singer), was the only stoppage. Knapp, too, was not difficult, its gradient of 1 in 5 only troubling 10 competitors, among whom were Lord Avebury (Ford), Mrs. Moss (Marendaz Special) and F. S. Hutchens (Wolseley Hornet), while E. J. Riddle had the bad luck to break a chain on his very old G.N.

Bownham is another hill which loses its power if the surface is hard, and the cars came up easily with monotonous regularity. F. R. Gerard (Riley) was the first to fail, but right at the end some difficulty was caused through the sun coming up over the brow of the hill and dazzling drivers completely. This occurred just at that steepest part of the hill where the road divides, the route being up the left-hand or upper pathway. Consequently some last minute decisions had to be made

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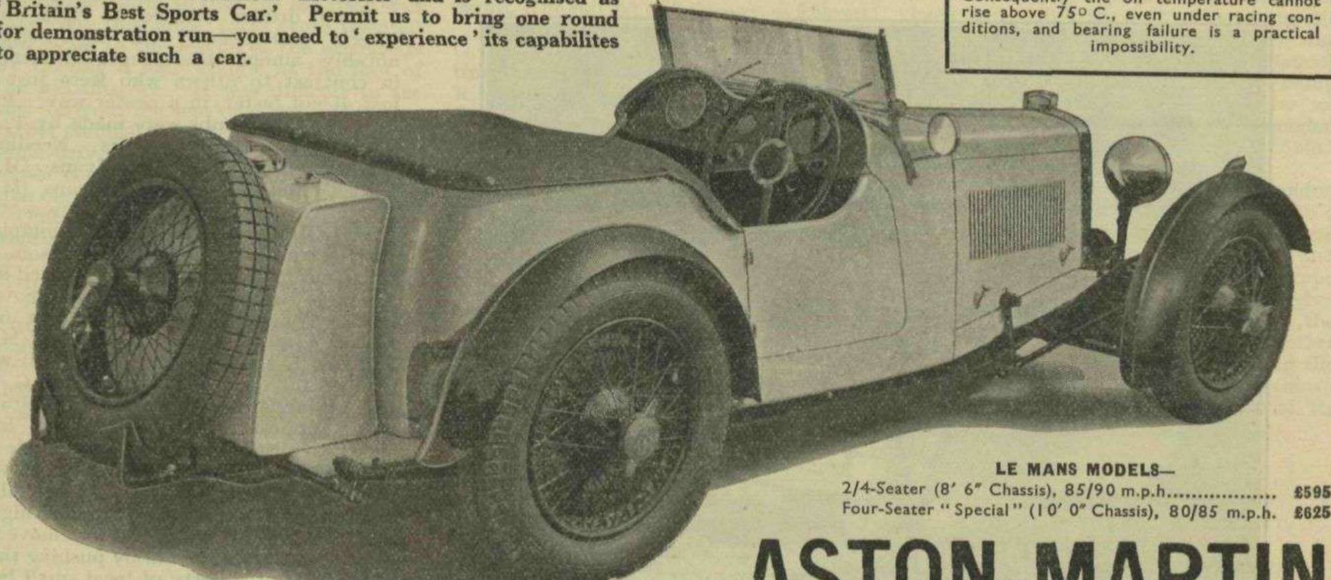

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ALL IS NOT GOLD . . . . .—continued.

as to which was the correct road, and J. C. Elwes (Singer) in particular was quite spectacular as he swung from side to side at speed. M. P. Tenbosch (Hillman Aero Minx) made no effort to keep going, and stopped with the remark that he couldn't see! At that moment J. A. Driskell arrived, wearing an extraordinary—but very efficient—fur helmet complete with a peak. He restarted his 8 h.p. Ford without difficulty. Finally R. S. Hodgkinson (Singer) retired at the foot of the hill with what was apparently clutch trouble. Some difficulty had been experienced by the marshals at the beginning of the trial at Bownham with an individual who objected to the hill being used as a test. His objection took the form of parking a large cart in the narrow lane, and some fairly firm persuasion was required to make him remove same.

J. Driskell, complete with fur helmet, brings his " Christmas Tree " Ford up Bownham.

Hodgkinson was not the only man who had retired by this time. Others were W. J. Goldsworthy (Singer), J. G. N. Ferguson (Rhode), C. T. Bruton (Austin), who had heard an expensive noise coming from beneath his Austin and found it to be a broken crankshaft, Mrs. Moss (Marendaz), and L. L. Hunt (Wolseley).

For some distance following Bownham there were no hills, the route taking competitors to a half-an-hour stop at the White Swan Inn. Then followed a winding section via Bushcomb Lane, Wortley, Seven Springs, Five Mile House, Edgeworth and Bisley to a 10 minute check at Eastcombe, where it was found that Mrs. Lockhart (M.G.), E. G. Wash (Ford) and G. Wood (M.G.) had fallen by the wayside.

Immediately after this came Ferris Court, with a timed section included for the purpose of deciding premier awards. Mr. Reynolds ensconced himself in a little hollow cut out of the hillside with his telephone and stop watch, and one by one the cars leapt away (more or less !) and hurled themselves at the first hairpin. Here it was a case of more haste less speed for the loose surface easily gave rise to a front-wheel skid which left many people with insufficient lock to round the bend without charging up the side of the bank. This happened to many drivers of fast cars which had accelerated fiercely up to this point, completely spoiling their times. J. W. Whalley, deserting his special open four seater Ford V8 for a saloon of the same make, was spectacular but kept his car under control, and the same can be said for C. Mann (1934 Ford V8). G. E. Abecassis, on a very old Austin Seven, charged the bank and was on the point of turning over. He instinctively put out his hand to hold the car up, but the timely counterbalancing work of his passenger saved the situation. R. C. Morris (Alvis) took a similar course, but his heavier car was more difficult to upset.

Many drivers seemed to spin their wheels unnecessarily on the hairpin, notably among the Singer fraternity, in contrast to others who were just as fast, if not faster, in a neater way. Particularly tidy climbs were made by T. C. Taylor (J.2 Midget), Mrs. Needham (Frazer Nash), Kenneth Evans (M.G. Midget) and Miss Doreen Evans (M.G. Midget).

E. J. Riddle, on the old G.N. complete with a couple of hurricane lamps in its tail, couldn't get round, but restarted in a sideways slide under his own power. R. E. Tongue (Aston Martin) got into rather a mess, as did J. Elliott (M.G. Midget), J. G. Tice (Avon Standard) who climbed the bank a good yard, and G. W. Olive (Standard). H. P. A. Peaty (Frazer Nash) approached the corner at high speed, realised he would be unable to make it, and stopped. He reversed and restarted without assistance. Miss Allan got round the first bend but failed higher up. The sliding cars tended to remove the loose stones from the hill by pushing them sideways, but a party of local small boys were determined to see fair play and carefully put them back again after each car had climbed.

Bussage is not a difficult hill, except when the stone setts at the bottom are slippery; then wheelspin prevents any speed from being obtained with which to tackle the 1 in 4 section. Four people stopped, G. E. Abecassis (Austin), C. C. Bliss (Windsor), A. Huggins (Singer), and Sir A. W. MacRobert (Crossley saloon).

[*Motor Sport Photographs*

F. R. Gerard (Riley) was one of the few failures on Nailsworth Ladder. He came to a standstill throught lack of power.

ALL IS NOT GOLD . . . . .—continued.

Iles Lane was the next obstruction. The gradient here is only 1 in 5, but the hill can be very difficult nevertheless. There is no room to rush it, and if it is muddy, large cars inevitably spin to a standstill. This year the frost had frozen the ground hard, so that the hill itself was easy, but this same Jack Frost relented and came to the rescue of the organisers by turning a long puddle at the foot of the hill into ice. It was difficult to see this ice from the seat of a car, and it was rather comical to watch the expression of some drivers' faces as they found themselves coming a standstill with wheelspin on what was apparently hard ground.

Quite a good number of seasoned drivers were caught in this way, among them being E. P. Ortweiler (M.G.), B. P. W. Twist (Triumph Gloria), Miss Allan (Bentley), L. Sandford (Singer), G. W. Olive (Standard), and W. M. Couper (Austin). T. W. Dongue (Riley), K. E. Lilley (Riley), F. R. Gerard (Riley), and E. Denny (Riley) also failed.

And so to the last hill, Nailsworth Ladder, which in normal circumstances should have been a real terror. The gradient is supposed to be 1 in 2½, but doesn't look it. Even so the hill is a formidable one, and it is a great tribute to modern cars that only 24 failed to climb. The full list of failures is as follows: R. A. Macdermid, E. P. Ortweiler, G. E. Abecassis, Miss Allan, J. H. Whittindale, F. S. Hutchens, Miss Watson, R. A. Hannam, A. F. Smethurst, A. L. Watson, B. G. P. de Mattos, Sir A. W. MacRobert, V. H. Tuson, Mrs. Garstin, K. E. Lilley, D. C. Cory, F. R. Gerard, C. C. Bliss, E. Denny, N. V. Terry, Lord Avebury, J. A. Driskell, O. O. Coryton, R. C. Hockey.

Of the many good climbs it is almost impossible to single out any for special mention. As makes, the M.G.'s, Singers, and Frazer Nashes were consistently good, the Singers heading the list without a single failure. Large cars with heavy bodies required some handling, and for this reason Miss P. McOstrich (Talbot) deserves special praise.

The hill was crowded with spectators, many of whom were of that idiotic type who must stand right in the path of the cars until they are nearly run over. The finishing point was only two miles away, so that the early numbers had time to get back and watch the rest of the competitors come up. Some amusement was caused when H. F. Wilmot (M.G. Magna) roared up at high speed, struck the bump with a tearing sound, followed by an appalling clatter, and left his mangled dumb-iron cowling on the road behind him.

Altogether, the North West London Motor Club is to be congratulated upon a really well run trial. C. F. Dobson, Clerk of the Course, left nothing to chance, and his staff work was a triumph of this type of organisation. No less than twelve observed hills were included, and if the dry surface made some of them rather easy, Dobson's foresight in stiffening the acceleration and timed sections retained for the London to Gloucester trial its reputation of severity.

PROVISIONAL RESULTS OF THE TWENTY-THIRD LONDON-GLOUCESTER TRIAL

Gloucester Cup: C. Mann (Ford V8).

South Midland Centre Plaque: J. Robinson (Lancia).

N.W.L. Committee Cup: H. Laird (Wolseley).

President's Cup: J. Tweedale (Frazer Nash).

Ladies' Cup: Miss D. B. M. Evans (M.G. Midget).

Team Competition: Ford Team (J. W. Whalley, C. Mann and G. M. Denton).

Runners up: K. D. Evans' Team (Miss D. B. M. Evans and K. D. Evans (M.G. Midgets) and R. E. Tongue (Aston Martin).

Class Winners: 850 c.c. J. A. Elliott (M.G. Midget). 1,100 c.c. R. T. Horton (Triumph). 1,600 c.c. H. Laird (Wolseley). Unlimited C. Mann (Ford V8).

Silver Cups (98%): E. E. Budd (Alvis), J. W. Whalley (Ford), G. M. Denton (Ford), H. Avery (Singer), A. W. Smith (M.G.), A. C. Fairtlough (Acedes), K. D. Evans (M.G.), P. Lees (Frazer Nash), W. H. Haden (M.G.), W. B. M. Fraser (Alvis), G. H. Robins (M.G.), J. Williams (Triumph), A. D. Taylor (Riley), A. S. Whiddington (Frazer Nash), C. Mann (Ford), J. Robinson (Lancia), H. Laird (Wolseley), J. Tweedale (Frazer Nash), Miss D. B. M. Evans (M.G.). J. A. Elliott (M.G.), R. T. Horton (Triumph).

Silver Medals (90%): N. H. Cole (Singer), SA, R. A. Macdermid (M.G.), F13: K. G. Marsh (Triumph), F10; M. May (Alvis), SA; W. J. B. Richardson (Singer), F2; A. B. Langley (Singer), SA; T. C. Taylor (M.G.), F12, CF; G. M. MacGregor (M.G.), SA; C. J. Fryer (M.G.), SA; C. G. Fitt (M.G.), F4; N. A. Prince (Austin), SA; N. A. Prince (Austin), SA; R. E. Tongue (Aston Martin), SR; W. E. C. Watkinson (M.G.), SA; W. J. Haward (Ford), SR; H. P. A. Peaty (Frazer Nash), F10; C. E. C. Martin (M.G.), SR; N. E. Bracey (Wolseley), SA; J. L. Fraser (M.G.), SA; J. D. Barnes (Singer), F3; J. R. H. Baker (Singer), CF; A. H. Langley (Singer), C F; J. A. Bastock (M.G.), OAT; O. Poppe (Austin), SA; F. Thatcher (Triumph), SA; Miss J. Astbury (M.G.), SA; E. Ainsworth (Standard), F3; H. F. Wilmot (M.G.), SA; C. Mackenzie (Singer), F10; H. R. Winnicott (M.G.), SA; G. H. Goodson (Austin), SA; Dom Impanni (M.G.), STS; J. C. Elwes (Singer), SA.

Bronze Medals (75%): G. May (Alvis), SR, SA, STS; V. W. Derrington (Wolseley), SR, SA; R. Gaspar (Vale), SR, SA; K. W. Hole (Singer), F2, SA; C. J. Sainsbury (Wolseley), SA, STS; R. C. Morris (Alvis), SR, SA, STS; F. M. Shepherd (Singer) F2, SA, STS; E. J. Riddle (G.N.), SA, F7, F10; B. P. W. Twist (Triumph), SR, SA, STS, F12; J. H. Whittindale (Triumph), SA, STS, F13; Miss P Goodban (Singer), LS, CCN, SA, STS; D. B. Payne (M.G.), F2, SA; F. S. Hutchens (Wolseley), F7, F13, CF; A. F. Scroggs (Trojan), SA, STS; J. A. M. Patrick (Singer), SR, SA; Miss R. Daniell (Wolseley), SA, STS; L. Sandford (Singer), SA, F12; Miss E. V. Watson (M.G.), SA, F13; A. Negal (M.A.N. Special), SR, F3, SA; C. A. H. Cann (M.G.), F3, SA; H. J. Ripley (Riley), F1, SR; H. C. Hunter (Riley), SR, SA; J. E. Clowes (Riley), SR, SA; J. E. Clowes (Riley), SA, STS; J. S. Harrison (M.G.), SR, SA, STS, F12; G. W. Olive (Standard), F2, SA, F12; J. G. Tice (Standard), SR, STS; H. J. Wilkes (Riley), SR, SA, STS; W. A. V. Davis (Wolseley), SR, F3, SA, STS; T. E. Price (Singer), SA, F10, F12; M. H. Lawson (Singer), F3, SA; D. A. Loader (Singer), SA, STS; T. W. Dargue (Riley), SA, STS, F12; A. L. Watson (M.G.), SR, SA F13; B. G. P. de Mattos (Morris) F2, SA, STS, F13; Mrs. W. M. Stanton (Riley), SA, STS; W. M. Couper (Austin), SA, STS, F12; C. V. Glass (Singer), F3, SA; Sir A. W. McRobert (Crossley), SA, STS, F13, CF; Miss P. McOstrich (Talbot), SR, F3, STS; G. C. Lloyd (M.G.), SR, SA; J. Selwyn (Singer), F2, SA, STS, F12; V. H. Tuson (Fiat), SA, F5, F12, F13; F. E. Elgood (Bentley), F2, SA, F5, STS; L. G. Johnson (Riley), SA, STS; Miss B. M. C. Marshall (G.N.), SR, F10; W. W. Whitnall (Morris), SA, STS; G. W. Clarke (M.G.), F5, STS; Miss C. Labouchere (Singer), SA, STS; M. G. Billingham (Singer), SR, SA; R. Lumbey (Singer), SA, STS; C. Ree (Singer), SA, STS; C. H. Wagstaff (Lea Francis), F2, F10; E. Denny (M.G.), F4, F5, F12, F13; J. H. Beeton (Riley), SA, STS; A. L. S. Denyar (Lea Francis), SA, STS; F. R. G. Spikins (Singer), SR, SA, F5, F10; R. L. Bellamy (Triumph), SA, STS; A. H. Garland (Jowett), SA, STS; J. A. Driskell (Ford), F1, SA, F13; A. H. L. Maclachlan (Singer), SR, STS; R. I. Kynaston (Wolseley), SA, STS; N. Roundhill (Singer), SA, STS; D. Froy (Fiat), F2, SA, STS, F12: A. C. Westwood (Singer), SA, F5, F10, F12

No Award (below 75%): E. T. Ortweiler (M.G.), SR, SA, STS, F12, F13; G. E. Abecassis (Austin), F2, F4, F5, F10, F11, F12, F13; R. A. Hannam (Austin), F1, SR, SA, STS, F11, F12, F13, CF; Miss M. Allan (Bentley), F2, F3, F4, F5, STS, F12, F13, CF; G. J. Rea (M.G.), SR, SA, F12, CF; C. Montague-Johnstone (Triumph), CCN, SA, CF; Mrs. A. Needham (Frazer Nash), SR, SA, OC CF; A. F. Smethurst (M.G.), SR, SA, F5, STS, F12, F13, CF; W. J. Barnes (Frazer Nash), SA, F7, CWS, F10, CF; E. V. Levetus (Lancia), OC, CWS, F12; A. Huggins (Singer), SR, SA, STS, F11, CF; T. Wagner (Triumph), F1, SA, STS, F12, CF; D. C. Cory (Riley), SR, SA, F4, F10, F13, CF; C. C. Bliss (Windsor), LS, F1, F2, F3, CBC, SA, F5, F10, F11, F12, F13; K. E. Lilley (Riley), SA, STS, F12, F13, CF; Mrs. L. Garston (Austin), F2, F4, F5, STS, F12, F13; A. E. Mills (M.G.), OC, SA, F12; F. R. Gerard (Riley), SR, SA, F5, F8, STS, F12, F13; N. V. Terry (Frazer Nash), F2, SA, F5, STS, F13; Lord Avebury (Ford), F1, F2, CBC, F4, F5, F7, CWS, STS, F12, F13, CF; M. P. Tenbosch (Hillman), F2, SA, F8, STS, F12; O. O. Coryton (Horstman), SR, SA, F5, STS, F13; R. C. Hockey (Bentley), SA, F7, F10, F12, F13.

Retired: W. J. Goldsworthy (Singer), A. Powys-Lybbe (Vauxhall), R. J. W. Appleton (Riley), E. G. Wash (Ford), J. G. N. Ferguson (Rhode), C. T. Bruton (Austin), Mrs. A. E. Moss (Marendaz), Mrs. M. Lockhart (M.G.), A. C. Hess (M.G.), R. S. Hodgkinson (Singer), I. F. Connell (Ballot), Mrs. C. V. Mills (M.G.), W. J. Cope (M.G.), L. L. Hunt (W9lseley), G. Wood (M.G.), D. West (Frazer Nash).

Non-starters: L. Maxwell (M.G.), M. A. McEvoy (M.G.), Mrs. A. G. Gripper (Frazer Nash), F. Winkworth (Seneschal), H. G. Dobbs (Riley), T. Hoare (Bugatti), Mrs. K. R. Lysley (Riley), R. T. Gardner (Frazer Nash), H. G. Conway (Austin).

KEY.

T =Touched.
F =Failed.
1 =Maidensgrove.
2 =Stanway.
3 =Kineton.
4 =Bismore.
5 =Mutton.
6 =Quarhouse.
7 =Knapp.
8 =Bownham.
9 =Ham Mill.
10 =Ferriscourt.
11 =Bussage.
12 =Iles Lane.
13 =The Ladder.
CCN =Outside time allowance at Chipping Norton
CBC = ,, ,, ,, Bull Cross.
CWS = ,, ,, ,, White Swan Inn.
CE = ,, ,,, ,, Eastcombe.
CF = ,, ,, ,, Finish.
CCH = ,, ,, ,, Cheltenham.
LS =Late at Start.
SR =Slow in Restart Test.
STS =Slow in Timed Section.
SA =Slow in Acceleration Test.
OAT =Omitted Acceleration Test.
IS =Passenger not normally seated.
OC =Omitted part of Course.

As a matter of general interest, the best performances in the special tests are noted below:—

Timed Section: 1st, R. A. Macdermid (M.G.); runners-up, C. Mann (Ford), H. Laird (Wolseley), Tie.

Restart Test: 1st, J. Williams (Triumph); runner-up, M. H. Lawson (Singer).

Acceleration Test: 1st, C. H. Wagstaff (Lea Francis); runners-up, R. A. Macdermid (M.G.), W. H. Haden (M.G.), Tie.

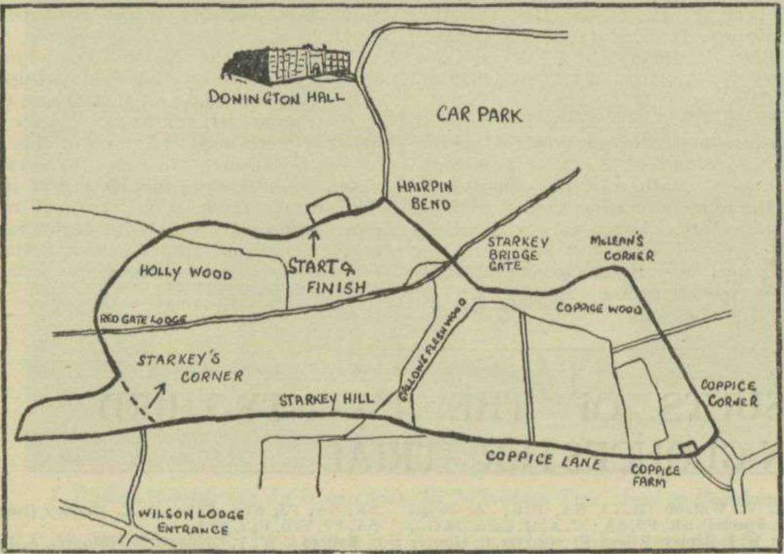
The Gloucester Cup was won by C. Mann (Ford), by 4/5th second from H. Laird (Wolseley) in the Acceleration Test, there being a tie on Marks and in the Timed Section.

ROAD RACING IN ENGLAND.

ALTERATIONS AT DONINGTON.

IMPROVEMENTS are being carried out at Donington Park which will make the circuit at once safer and more interesting for drivers of the larger cars, who last year often found it difficult to pass slower vehicles on the short stretches of straight road.

The road for some distance on either side of the S-bend in Gallows Flesh Wood will be widened, and the wood on the outside of the course cut down, so that only a slight curve will be left. Instead of turning right at Starkey's Corner, the road will be continued straight on slightly to the left of the corner for 300 yards, then there will be a right-angle corner and a more gradual bend bringing the road back on itself. It will rejoin the present track by a further gradual bend midway between Starkey and Red Gate Lodge. This addition to the circuit will give a straight of over one mile, with plenty of width for passing.



At Donington cars must keep to the right, and so an enclosure for cars retiring during the race will be made on the inside of the course, opposite the present competitor's paddock. This innovation will make it unnecessary for cars about to be withdrawn to cross the track, a manœuvre which was liable to obstruct following competitors.

It is interesting to notice that the Derby and District Motor Club have booked a date, October 6th, on the International Calendar for Motor Races at Donington. The principal event is to be a Fifty Mile Race, and pits of a temporary character will be erected in the middle of the long straight. Mr. Craner does not anticipate that with the heavy expenditure of funds this winter it will be possible to put up a Stand during the coming year, but when it does become feasible, it will be erected facing the pits. The wood which borders the S-bend will be cut back this year, and spectators on the Stand will be able to get a fine view in both directions.

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Club News

THE G.W. MOTOR CLUB.

THE Club is now affiliated to the A.C.U. South Midland Centre, and has applied for a Restricted Permit for a Reliability Trial to be held on January 14th. This will enable ten other clubs affiliated to the same Centre to be invited, so that a first-class event should result. The entrance fee has been fixed at the specially low rate of 3/-, and full particulars of the route and entry forms will shortly be available from the secretary, Mr. C. J. A. Curd, 30, Denehurst Gardens, Richmond, Surrey.

Number Five of the "Exhaust," the Club's journal, has now appeared, and contains full details of the activities of members, as well as useful notes and articles.

BUGATTI OWNERS' CLUB.

The Night Trial is one of the most popular events on the Club's fixture list, and 31 hardy wights turned out on Saturday, November 25th. This year the start took place at the Chorley Wood Hotel, Rickmansworth, the first man being sent away at 11 p.m. In addition to Bugatti Club members, entries were also received from the M.G., Hornet, Lagonda and Frazer Nash clubs.

More or less the same route as last year was followed, the first hill being Kop, which should have been timed, but wasn't, owing to a faulty apparatus. No failures were noted, of course, and everyone seemed to take the opportunity of coming up as fast as possible. Especially fast were Col. G. M. Giles (Bugatti 3.3), C. G. Vokes (Lagonda), and K. D. Evans (M.G. Midget). The next check was at West Hagbourne, which was reached via Shirburn, Shillingford and Didcot. Only N. Manby (Singer) was late here, but E. Stapleton (Invicta), W. Ruck-Keene (Austin) and D. B. H. Robinson (Riley) were all too early, and were consequently penalised.

The acceleration and brake test was held just after the check, and was divided into two sections of over and under 1,500 c.c., the standard time being 32.7 and 33.4 secs. Fastest in the unlimited class was R. E. H. Gould (Bugatti), 23.4 secs., followed by W. W. Blackstone (O.M.), 27.4 secs., A. S. Whiddington (Alvis), 27.6 secs., and K. W. Bear (Bugatti), 29.4 secs. Some of the "under 1,500's" made splendid times, in some cases being second only to Gould. Here are the best times: F. S. Hutchens (Hornet) 25.4 secs., K. D. Evans (M.G. Midget) 25.6 secs., Miss Doreen Evans (M.G. Midget) 28 secs., R. J. W. Appleton (Riley) 28 secs., and G. C. Lloyd (M.G. Magna) 28.6 secs.

The refreshment stop at Rowstock Cross was very welcome, for although the night was a fine one the temperature was definitely chilly. Duly revived, competitors then proceeded to a check at Bull's Cross, in the Cotswolds. Three hills had to be climbed hereabouts, Stancombe, Sheepscombe and Portway, and of these only the first-named caused any difficulty. K. W. Bear (Bugatti) failed, as did J. Sieger (Lagonda) and R. P. Gardner (Frazer Nash), both these drivers retiring, and finally E. Stapleton (Invicta) had to be assisted.

Then came the final run by way of innumerable lanes to Broadway, a section which caused many marks to be lost last year. This time, however, only C. G. Vokes (Lagonda), E. Stapleton (Invicta) M. A. J. Windrum (Salmson), T. W. F. Windrum (Austin), W. Ruck-Keene (Austin) and D. B. H. Robinson (Riley) fell into the trap.

And so to breakfast at the Lygon Arms, and a quiet run back to Town.

RESULTS.

Silver Medals: G. M. Giles (3.3-litre Bugatti), J. S. Steele (2-litre Bugatti), R. E. H. Gould (5-litre Bugatti), A. S. Widdington (Frazer-Nash), G. E. Mayo-Smith (2-litre O.M.), W. H. Blackstone (2-litre O.M.), F. S. Hutchens (Wolseley Hornet), Miss D. Evans (M.G. Midget), K. D. Evans (M.G. Midget), G. C. Lloyd (M.G. Magna), J. F. de Lattre (Austin), R. J. W. Appleton (Riley), A. E. Blackwell (Singer Nine).

Bronze Medals. K. W. Bear (3-litre Bugatti), J. Baines (2.3-litre Bugatti), W. R. Almond (2-litre Lagonda.

No Award: C. G. Vokes (2-litre Lagonda), N. Manby (Singer Nine) E. C. W. Stapleton (1,200 c.c. Invicta, S), M. A. J. Windrum (Salmson), T. W. F. Windrum (Autin), W. Ruck Keene (Austin), D. B. H. Robinson (Riley Nine), D. Munro (1½-litre Invicta).

Retired: J. Singer (2-litre Lagonda), R. P. Gardner (Frazer Nash), G. Rea (M.G. Midget), J. W. King (Riley Nine).

THE KYNASTON CAR CLUB.

This is a new club, recently formed for the purpose of promoting social and sporting events. The headquarters of the Culb are at Harrow Weald, Middlesex.

Anyone interested should get in touch with the Hon. Secretary, Mr. D. Burnford, Kynaston Court, Box Tree Road, Harrow Weald, Middlesex.

MALDEN AND D.M.C.

The Autumn Cup Trial took place on Sunday, December 3rd, starting at Milford, Surrey. Owing to the dry weather, little difficulty was experienced with hills, and the competitors reached the finishing point at Liss, Hants, in good time.

RESULTS:

Autumn Cup: L. Stone (M.G. Midget). **Special Souvenirs:** L. Wilson (Morris Minor) and F. C. Peacock (Riley). **Silver Medal:** G. W. Groom (Vauxhall). **Team Prize:** the car team—E. Limpus (Morris Minor), L. Wilson (Morris Minor) and L. Stone (M.G. Midget).

COMBINED MOTOR CLUBS.

The ninth annual charity fancy dress ball of the Combined Motor Clubs will be held at the Royal Opera House, Covent Garden, London, W., on Friday, January 26th, from 9 p.m. until 3 a.m. The hon. organising secretary is Mr. A. E. Cooke, 91, College Road, Kensal Rise, London, W.10.

FRAZER-NASH C.C.

A film show was held at the Clock House, Welwyn, Herts, on Sunday afternoon, December 3rd. Some really good films were shown, notably those taken by one of the members, W. R. Nimmo, and some "shot" at the Screw Hill-climb. There was an interval for tea, and then more films were shown until 7 p.m.

MID-SURREY AUTOMOBILE CLUB.

The Annual Club Dinner and Dance was held at the Park Lane Hotel on the 24th November. Professor A. M. Low, the President of the Club, welcomed the guests in a characteristic speech. Lord Howe praised the good work of the Club in promoting Trials, and hoped for a revival of the Surbiton "Hundred," the Brooklands race organised by the forerunner of the present Club. He drew attention to the increase of anti-motoring propaganda and said that bodies of motorists such as the one he was addressing could exert a powerful influence to resist panic legislation. Sir Malcolm Campbell spoke on the same lines, stressing the need for the utmost care on the roads. Mr. Kaye Don also spoke.

The secretary reminded members of the three successful Trials which the Club had organised, the London-Barnstable, the Grand Cup Trial and Experts Invitation Trials, all of which were widely appreciated. Lady Campbell presented the prizes for the various events, and the members and their guests then adjourned to the dance floor.

TRIUMPH MOTOR CLUB.

A large gathering attended the 2nd Annual Dinner of the Triumph Motor Club at the Piccadilly Hotel on December 6th, and it proved to be one of the most cheerful functions which have been staged in 1933.

Colonel Holbrook, the Chairman, spoke of the encouraging way in which the membership of the Club was increasing and welcomed the co-operation of the Press, of which a number of representatives were present. One of the best known was of course Sir Malcolm Campbell, who touched, as usual, on the increasing restrictions being put on private motorists.

Mr. C. R. Fairey, the well-known aeronautical engineer, made a bright speech in support of the Ladies, and a reply on their behalf was made by Commander Holbrook and Mr. Findon, Editor of the "Light Car."

John Tilley, the comedian, gave an account, happily erroneous, of the Club's financial standing, and the guests then moved to the Ballroom where they saw a capital cabaret show. Dancing, as usual, concluded a most enjoyable evening.

Entries for the Monte Carlo Rally.

REPORTS of intense cold, blizzards and the like have in no way discouraged the Rally-minded, and entries, which of course reach a crescendo just before the closing date of December 24th, have been coming in well. Several English drivers, including Lord de Clifford, the President of the British Competitors' Club, will attempt the difficult journey from Athens, while Bucharest, which may prove an even more strenuous starting point, will also have its supporters. Another interesting feature will be the friendly rivalry between the Triumph and Riley teams, each of which will have representatives on all the more highly marked routes.

As we go to press, the official list is as follows :—

No. 1 M. Vasselle, Hotchkiss.
2 Mme. Rouait.
3 K. W. B. Sanderson, Alvis (J.).
4 L. Gas-J. Trévoux, Hotchkiss.
5 G. De Lavalette, Peugeot.
6 Sq. Lr. Fullerton, Sunbeam (J.).
7 Dr. Sprenger Van Eyk, Ford.
A. A. J. Wieleman.
8 Mme. Mareuse, Peugeot.
9 Major Douglas Mlrris, Inoicta (V.).
10 H. Th. Van Marken, Talbot.
11 J. H. M. Van der Meulen, Ford.
12 Mlle. Eva Stackelberg, Hupmobile (U.)
14 H. Hechel-A. Koch, D.K.W. (T.).
15 F. S. Barnes, Singer (S.).
16 Lieut. W. D. Winterbottom, Bentley (L.).
17 Marc Chauvierre, Chenard-Walcker.
18 S. C. H. Davis, Railton Terraplane (J.).
19 G. E. Stott, Alvis. (B.).
20 F. De Ribeiro Ferreira, Railton Terraplane (A.).
21 R. P. Michez, Alfa-Romeo.
22 Mrs. M. W. Stanton, Riley (U.).
23 Odd Berg, Riley (S.).
24 S. Gootnick, Mercédès (J.).
25 J. Kingston-Whittaker, M.G. (J.).
26 N. Black, Hudson (U.).
27 Mme. M. J. Marinovitch, Peugeot.
28 J. A. Thoenes, Rover.
29 Lord de Clifford, Lagonda (A.).
30 J. A. van Beeck Calkoen, Ford.
31 G. R. Brocklebank, M.G. (J.).
32 Miss Champney, Riley (U.).
33 A. N. McLintock, M.G.
34 T. H. Wisdom, Armstrong-Saurer-Diesel (J.).
35 Miss F. Taylour, Rover.
36 A. E. Dobell, Alvis (M.).
37 J. Bignan, Renault.
38 O. W. Johannsen-F. T. Eig Olsen, Chevrolet
39 R. R. Pelham-Burn, Riley (J.).
40 J. Cameron Brown, Riley (B.).
41 Rupert Riley, Riley (A).
42 T. A. Sangster (Riley, (T.).
43 T. C. Griffiths, Riley (U.).
44 A. Bebag-Montefiore, Frazer-Nash (U.).
45 W. P. Maidens, Riley.
46 M. T. Minshall, Singer.
47 J. Van der Heyden, Studebaker.
48 Prince L. Narischkine, Pontiac.
49 K. Bryde, Jnr., Austin.
50 O. Berner, Adler.
51 Dr. P. Sifflet, Aries.
52 H. E. Symons, Essex (A.).
53 D. E. Harris, Singer.
54 Mdlle. Hustiux, Peugeot.
55 C. J. Joyce, Talbot (J.).
56 E. Mutsaerts, Ford.
57 C. La Haye-R. Quartresous, Renault.
58 R. P. Gardner, Lagonda (J.).
59 R. Carriere-H. Avril, Peugeot.
60 J. A. Driskell, Ford (J.).
61 D. H. Murray, Delage (J.).

A. denotes Athens, B. Bucharest, G. Gibraltar, J. John o' Groats, L. Lisbon, M. Messina, S. Stavanger, T. Tallinn, U. Umea, V. Valencia.

Vasselle, winner of the Rally for two years in succession, again heads the list, and will probably be driving one of the two-litre four cylinder cars. De Lavalette and Mme. Mareuse, also winners of their classes in last year's event, are again to the fore.

Lord De Clifford, who is driving a 4½ litre Lagonda, is making a great effort this year to win back the premier award for Great Britain. He planned to visit Athens in the middle of December, in company with Symons and Jack Ridley, so as to get some ideas of the conditions prevailing. They were to drive to Brindisi and take a steamer from there to the Piraeus. Apparently a concrete road has been built from Athens to the Greek frontier, cutting out the muddy section which was one of the principal obstacles on the Athens route. H. B. Browning, the secretary of the Competitors' Club, will be going in the Lagonda during the actual Rally.

Ridley's 10 h.p. Triumph, like that of Healey, is fitted with 9 inch tyres on 16 inch wheels, and tests over ploughed fields and other rough ground showed that the car was capable of proceeding steadily under any conditions. The cars carry 23 gallons of fuel, part of this being accommodated in tanks under the floor-boards. The ground clearance is about 10 inches. Rupert Riley and Cameron-Brown will be driving Riley Army Tourers, which also have good ground-clearances.

Ribeiro-Ferreira, the Portuguese driver, is taking a Railton Terraplane, and is having the rear hubs extended so that he can bolt his spare wheels alongside the normal rear wheels, like a "Shelsley Special."

One does not usually associate supercharged cars with the Rally, but this year England will be sending at least three. Lieut. Winterbottom will be taking a blown 4½ litre Bentley from Lisbon, as the car will not be ready in time to go from Valencia. Gootnick is taking a 38-250 Mercédès from John o' Groats, and as it is a two-seater, the spare driver, who has to travel in the dickey, will have a chilly time crossing the Grampians. Sebag-Montefiore is driving a Frazer Nash with a Jameson blower, and is preparing formidable spiked tyres for his trip from Umea.

Messrs. Autocheques of 33, Regent Street, S.W.1. have made arrangements for the Rally, and competitors from John o' Groats will be conveyed across the Channel with their car on a special steamer, and from the 24th to the 29th January will be accommodated and fed at the Grand Hotel, Monte Carlo, at an inclusive cost of £11 0s. 6d., while the cost for passengers will be £2 less. Those proceeding to Monte Carlo from foreign starting points can also take advantage of the good terms offered by the Autocheque service, and their stay in Monaco will cost £8 8s. A special baggage service from London, which conveys suitcases at £1 each and trunks at £2, will be in operation.

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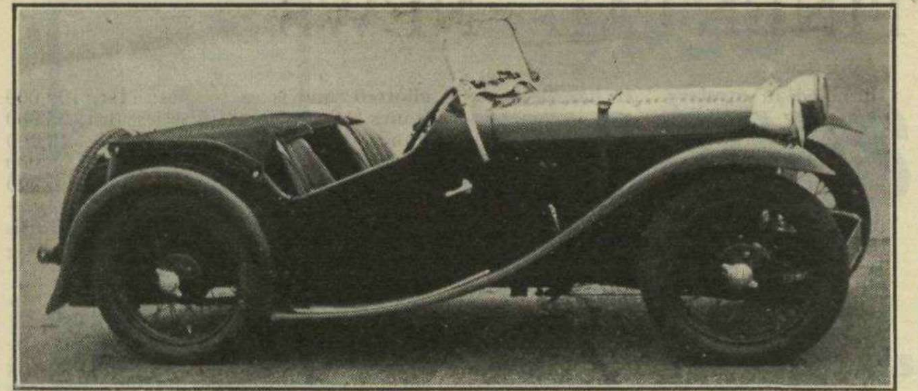


THE AUSTIN "65"

AN ATTRACTIVE AND ECONOMICAL SMALL CAR

THE credit of displacing the small Continental sports car from the roads of England must be given to the Austin Seven, and though other cars of more modern design have ousted it from some of its former popularity, the Seven still has numerous adherents. The Ulster Austin, which had a special lowered chassis and a tuned engine, was naturally more suitable for speed events and the like, but was more expensive. The new "65" is fitted with the lowered chassis, and a sports engine, but is sold at a very reasonable figure, and should be welcomed by the numerous enthusiasts who are constantly asking how to convert their standard models. The car which we tested was fitted with a special Arrow body built for H. A. Saunders & Co., of The Broadwalk, Golders Green, N.W.11. which strikes a new note in Austin coachwork.

It goes without saying that a small engine must turn over rapidly to produce its power, but the Austin ran smoothly and without vibration throughout its range, although not mounted on rubber. It was quite flexible too, running on No. 1 petrol, but in order to get away quickly the gear-box had to be used freely. It was one of the best we have tried, with an easy and rapid change, and constant-mesh second and third gears. Third and top gears are fitted with synchro-mesh mechanism, an additional refinement rarely used. The clutch had a short travel, but took up the drive smoothly.

The steering was high-geared and light, but without much caster-action. This did not cause any difficulty as the wheel was easily centred, but a longer steering column would be appreciated by tall drivers, since at present the wheel rim is in contact with one's driving rug.

Brief Specification.

Engine : Four cylinder 56 *mm. bore and* 76 *mm. stroke. Capacity* 747.9 *c.c. Tax* £8. *Side by side valves. One down-draught Zenith carburetter. Coil ignition.*

Gearbox : Four speeds and reverse. Ratios 5.6, 8.38, 13.28 *and* 22.9 *to* 1. *Centre change. Second and third gears constant mesh. Synchro-mesh third and top.*

Rear Axle : Bevel. Semi-floating.

Suspension : Transverse front, quarter elliptic rear.

Brakes : Cable operated.

Dimensions : Wheelbase 6*ft.* 9*in. Track* 3*ft.* 4*in.*

Weight of chassis, 6 *cwts.*

Price with special Arrow body, £187 10s.

The accelerator pedal is close beside the brake, so that in an emergency stop it is possibly to apply both at once. We therefore preferred to use the hand-lever, which also operates the four brakes, and using a fair amount of force we were able to pull up from 40 m.p.h. in 62 feet without any deviation from the straight. The position of the steering wheel and accelerator could be altered without much difficulty, if they were found to be inconvenient.

In spite of these minor annoyances, the car was definitely pleasing to handle, for the driving position was good. The steering wheel and the gear-lever were right under one's hand and the cut-away of the side of the body supported the right arm. With a short wheelbase car one can slip through traffic with the minimum of delay, while the lowered chassis allows corners to be taken in exhilerating fashion. It also seems to have improved the comfort travelling over indifferent surfaces, and the tyres of 3½ inch sectionare generous in proportion to the weight of the car.

The speeds in the gears are 30 m.p.h. on second, and 50 on third. The maximum on top was only 55 m.p.h., which was disappointing, even though the engine was still a little stiff, but it was found after the test that the ignition had been set in a position much too far retarted. The car is guaranteed by the makers to do 65 m.p.h. and there is no reason why it should not do so. Even with retarded ignition the Austin maintained 45-50 m.p.h. under all main-road conditions.

The four-cylinder engine still retains its side valves, but has a downdraught induction system which improves accessibility. The two-bearing crankshaft is carried on roller bearings and is a specially stiff one with forced lubrication, and strengthened connecting rods are also fitted. A high-compression head and a high-lift camshaft are standard. The four-speed gear-box is in unit with the engine, and the propellor shaft is encased in a torque tube. The front axle is slightly V shaped in front view, and the transverse spring is set up with a reverse camber to lower the centre of gravity. The rear springs are quarter elliptics without camber for the same reason, and both sets are bound with tape.

The brakes are cable operated, and all four are controlled by pedal and lever. They can be taken up simultaneously by means of a single wing-nut.

The body is one of the most successful we have seen on an Austin Seven. The wide louvred bonnet, reminiscent of the one used on the Ulster model, gives the car an appearance of solidarity, and the long swept wings avoid the impression of stumpiness which one is liable to get on short wheelbase car. A seven gallon rear tank with a quick-action cap, is mounted at the rear of the body, and should take the car nearly 300 miles at a filling. The spare wheel is mounted vertically behind the tank.

The body is of ample width, and the two front seats, which have pneumatic upholstery, are adjustable. There is a space behind the seats large enough for several suitcases, or a third passenger could be carried in emergency. The hood is carried beneath the tonneau cover. The battery is carried under the dash, and there is also a large felt-lined locker for tools.

As a fast and economical run-about the Austin is good value, and the pleasing lines of the Arrow body make it altogether a desirable little car.

THE BUGATTISTI DINE.

THE Bugatti Owners' Club held their fourth Annual Dinner at the Dorchester Hotel on December 15th. An encouraging number of members were present, and were disappointed to find that neither M. Ettore Bugatti nor his son Jean had been able to come to England.

Lord Howe, the President of the Club, spoke of the success of its events and welcomed the secretaries of the Frazer Nash, Hornet and M.G. Car Clubs, who co-operated with the Bugatti Owners in a number of trials. The prizes for the Monte-Honiton Rally, the Night Trial, the Lewes Hill Climb and other competitions were then presented, and L. G. Bachelier took the lion's share of these awards, and the Victor Ludorum Cup for the best all-round performance.

The floor was then cleared for dancing, and not a few of the guests penetrated to the Dorchester Restaurant to see "Les Girls," the Midnight Follies Show.

CONTINENTAL NEWS

A New Grand Prix ?

THE A.C. du Rhône have decided to organise a Grand Prix race through the streets of Villeurbanne. The circuit suggested has a length of 3½ kilometres, and the race will be over 100 laps, or 350 kilometres in all.

The date has been tentatively fixed for some day in the first fortnight of June, presumably on a Sunday, but whether this race will attract entries from such events as the Eifel Race and Lwow G.P. which are already on the International Calendar is a doubtful point. It would probably be wiser for the A.C. du Rhône to wait until some race on the Calendar is abandoned, and then fix their date accordingly.

The Grand Prix of Algeria.

It is stated that a group of wealthy Algerian sportsmen are combining their efforts to organise the Grand Prix Algeria some time in May.

The Italian Championships.

As a result of the championship held each year by the R.A.C. d'Italia, the following awards have been made: 1, Fagioli (G.P. d'Italia and Coppa Acerbo); 2, Nuvolari (Circuit Bordino and Coppa Ciano); 3, Varzi (Tripoli); 4, Brivio (Targa Florio); 5, Trossi (Pontedecimo-Giovi); 6, Borzacchini (Susa-Mont-Cenis); 7, Tadini (Stelvio); 8, Bonetto (first Italian in G.P. di Monza).

Championships are also held for the 1,500 c.c. and 1,100 c.c. classes, and these were gained by Louis Castelbarco (for the second year in succession) and Nando Barbieri respectively. The amateur title was won by the Marquis G. M. Cornaggia Medici, followed by Ristelli and Charles Castelbarco.

As usual, the car championship was won by Alfa-Romeo.

Caracciola's Plans.

The German champion, Rudolf Caracciola, was greatly missed by all followers of motor-racing on the Continent last season, for he can always be depended upon to take his place among the leaders of a race.

We are glad to report that Caracciola has now been passed as fit by the doctors who have been regularly attending him since his bad accident while practicing for the 1933 Monaco G.P. when his thigh was fractured in no less than six places.

After a few months recuperation at the Winter Sports—Caracciola generally goes to Arosa—the famous German driver will take his place in the new team of Mercédès-Benz racing cars of 2.9 and 3.8 litres capacity which will compete in all the principal events of 1934. The other drivers will be Manfred von Brauchitsch, the motor-cyclist Ernst Henne, and a young amateur called Bernet.

The Auto. Union racing car.

The racing car which will defend the colours of the German Auto Union (Horsch Wanderer, Audi and D.K.W.) is still shrouded in mystery. It has been designed by Dr. Porsch, and is generally referred to in Continental circles as the Porschwagen. Others call it the 'P' for short.

The greatest secrecy is being observed in the construction and testing of the car, but the single machine so far completed at Chemonitz has been seen at the Nurburg Ring. It was seen to have its 16 cylinder 3,200 c.c. engine at the rear, the two banks of cylinders being side by side. The power output is rumoured to be 300 h.p. and the maximum speed to be in the region of 155 m.p.h. The fuel tank is placed at the forward end of the car, and the driver sits in a single seat in the middle. The whole car is said to be lower than the single seater Alfa Romeo, and is perfectly streamlined.

Some idea of the secrecy which shrouds the whole affair can be judged by the fact that the drivers did not even know that the car had been finished and taken to Nurburg Ring. Then an urgent message was sent to Hans Stuck, the Prince of Leiningen, Momberger and Sebastian for a preliminary inspection of the new machine.

Its performance will be watched with great interest in the first race in which it appears.

The Bugatti team get down to it.

Ettore Bugatti is nothing if not thorough. He is not content with merely engaging two well known drivers to handle his team of 2.8 litre cars in 1934, and letting them take over the cars just before the first race. Instead, he has made it a clause of their contract that René Dreyfus and Jean P. Wimille should go to live near Molsheim, and should work each day in the Bugatti factory. By this means he hopes to give his drivers a complete training in the construction and mechanical details of the cars, which is bound to reflect on their actual driving on the road.

For Indianapolis ?

Every year there is a rumour that one or two European drivers will go over to the States for the Indianapolis "500," which is held in May. The latest driver who is supposed to be making the trip is Raymond Sommer, but which car he will drive is not yet decided.

Incidentally, Sommer has ordered a 3 litre Maserati for 1934, but it is also possible that he will drive an entirely new car designed by independent engineers.

Good prize-money at Rheims.

The Automobile club de Champagne are unsparing in their efforts to ensure the success of the Grand Prix de la Marne. They have made the Rheims circuit a model of what a road course should be. The permanent concrete grandstands are comfortable and well appointed, and the road surface is kept in good shape.

A good entry is always attracted, and the 1934 race should be well up to standard. The prize money has already been allotted, and is as follows: 1st, 100,000 francs; 2nd, 50,000 francs; 3rd, 25,000 francs; 4th, 15,000 francs; 5th, 12,000 francs; 6th, 10,000 francs; 7th, 8,000 francs; 8th, 7,000 francs; 9th, 5,000 francs; 10th, 3,000 francs. At the present rate of exchange the first prize works out at something like £1,200—something like a prize!

The Grand Prix d'Auvergne.

The name of Auvergne will always be associated in the minds of motor-racing enthusiasts with the famous Gordon-Bennett Cup of 1905, won by Thiéry on a Brasier. Now the A.C. d'Auvergne are going to organise a race again, and have booked a fixture on the International Calendar for 1934.

Three circuits are under consideration. The first is of the "round the houses" variety and measures 3 kilometres. The second is a more sporting course on open roads, and includes the hill of Baraque, up which a climb is held every year; this circuit measures 11 kilometres, but has certain difficulties in the way of access for spectators. Finally a course of 4 kilometres alongside the stadium at Vichy is being investigated, and the club has decided to let the choice be determined by an official of the A.C.F.

Racing in Sweden.

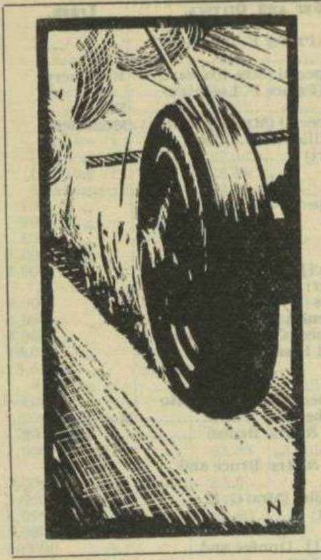
Following the bad accidents which took place in the motor-cycle Grand Prix at Vram and the car race at Saxtorp, the Swedish Automobile Club has decided not to organise its Summer and Winter Grand Prix races next year. There is a possibility, however, of a touring car race being substituted, but this race would probably be just as dangerous as the others, for it was touring cars which started the "pile-up" in the Summer Grand Prix.

Etancelin and Moll to drive Maseratis.

The ban on the sale of monoposto Alfa Romeo to foreign drivers is having the inevitable effect of increasing the orders for Maseratis.

Among those erstwhile Alfa Romeo drivers who have changed over to the Bologna firm are Philippe Etancelin and Guy Moll. Etancelin actually ordered his car some time ago, and has been promised delivery by December 15th, but at the time of going to press we do not know whether he has actually secured his machine. His intention is to be thoroughly prepared for next season in good time, so he has sent his mechanic Marius to the Maserati factory for a month. Then, when he gets the car, Etancelin is going to Montlhéry for long and arduous practice, so that he will be fully at home with his new mount. He will be a dangerous rival in 1934.

Moll was on the verge of placing an order for a monoposto Alfa Romeo, but was not satisfied with the price or delivery date. Now he has gone over to Maserati, and hopes to be ready in time for the Pau G.P. on February 19th.



1933 RECORDS

World's and International Class Records to date

WORLD'S RECORDS.

Record.	Speed. m.p.h.	Car and Drivers.	Track.
1 kilometres (s.)	88.52	Napier Railton (Cobb)	Brooklands
1 ,, (f.)	272.46	Campbell Special (Sir M. Campbell)	Daytona
1 mile (s.)	102.52	Napier Railton (Cobb)	Brooklands
1 ,, (f.)	272.11	Campbell Special (Sir M. Campbell)	Daytona
5 kilometres (f.)	257.30	,, ,,	,,
5 miles (f.)	242.75	,, ,,	,,
10 kilometres (f.)	238.67	,, ,,	,,
10 miles (f.)	164.08	"Enterprise" (N. Smith)	90 Miles Beach N.Z.
50 kilometres (s.)	136.52	Union 76 Special (Frame)	Murock
100 ,, (s.)	134.73	Panhard (Eyston)	Montlhéry
200 ,, (s.)	132.85	Bugatti (Czaikowski)	Avus
500 ,, (s.)	123.63	Napier Railton (Cobb, Lewis, Richards and Paul)	Montlhéry
1,000 ,, (s.)	122.05	,, ,,	,,
2,000 ,, (s.)	116.08	Delage (Don, Eyston, Eldridge, Frettet and Denly)	,,
3,000 ,, (s.)	113.00	Voisin (Marchand, Morel and Kiriloff)	,,
4,000 ,, (s.)	113.07	,, ,,	,,
5-30,000 ,, (s.)	Up to 112.93	,, ,,	,,
35-300,000 ,, (s.)	From 77.42 to 58.08	Citroen (Marchand, Presalé and others)	
50 miles (s.)	139.61	Union 76 Special (Frame)	Murock
100 ,, (s.)	132.90	Bugatti (Czaikowski)	Avus
200 ,, (s.)	126.44	Napier Railton (Cobb, Lewis, Richards and Paul)	Montlhéry
500 ,, (s.)	123.27	,, ,,	,,
1,000 ,, (s.)	116.36	Delage (Don, Eyston, Eldridge, Frettet, Denly)	,,
2,000 ,, (s.)	116.08	,, ,,	,,
3,000 ,, (s.)	113.14	Voisin (Marchand, etc.)	,,
4,000 ,, (s.)	93.97	Alfa-Romeo (Chinetti, Pesato and Zehender)	,,
5-20,000 (s.)	Up to 91.17	Voisin (Marchand, etc.)	,,
25-180,000 (s.)	77.66-57.97	Citroen (Marchand, etc.)	,,
mls. yds.			
1 hr. (s.) 132 1537	132.87	Bugatti (Czaikowski)	Avus
3 hrs. (s.) 372 1734	124.33	Napier Railton (Cobb, Lewis, Richards and Paul)	Montlhéry
6 hrs. (s.) 735 1316	122.62	,, ,,	,,
12 hrs. (s.) 1353 1606	112.82	Voisin (Marchand, Morel and Kiriloff)	,,
24 hrs. (s.) 2723 1746	113.50	,, ,,	,,
2 days (s.)	94.40	Alfa-Romeo (Chinetti, Pesato and Zehender)	,,
3-10 days (s.)	Up to 88.54	Voisin (Marchand, etc.)	,,
17-133 days (s.)	77.51-58.07	Citroen (Marchand, etc.)	,,

INTERNATIONAL CLASS A.—Over 8,000 c.c.

Record.	Speed. m.p.h.	Car and Drivers.	Track.
1 kilometre (s.)	88.52	Napier Railton (Cobb)	Brooklands
1 ,, (f.)	251.34	Napier-Campbell (Sir M. Campbell)	Daytona
1 mile (s.)	102.52	Napier Railton (Cobb)	Brooklands
1 ,, (f.)	253.97	Napier-Campbell (Sir M. Campbell)	Daytona
5 kilometres (f.)	247.94	,, ,,	,,
5 miles (f.)	242.75	,, ,,	,,
10 kilometres (f.)	238.67	,, ,,	,,
10 miles (f.)	129.29	Delage (J. R. Cobb)	Brooklands
50 kilometres (s.)	125.64	Napier Railton (Cobb, Lewis, Richards and Paul)	Montlhéry
100 ,, (s.)	126.73	,, ,,	,,
200 ,, (s.)	126.84	,, ,,	,,
500 ,, (s.)	123.63	,, ,,	,,
1,000 ,, (s.)	122.05	,, ,,	,,
2,000 ,, (s.)	107.54	Renault (Garfield, Plessier and Guillon)	,,
3,000 ,, (s.)	107.29	,, ,,	,,
4,000 ,, (s.)	107.92	,, ,,	,,
50 miles (s.)	126.67	Napier-Railton (Cobb, Lewis, Richards and Paul)	,,
100 ,, (s.)	127.09	,, ,,	,,
200 ,, (s.)	126.44	,, ,,	,,
500 ,, (s.)	123.27	,, ,,	,,
1,000 ,, (s.)	108.31	Renault (Garfield, Plessier and Guillon)	Montlhéry
2,000 ,, (s.)	107.49	,, ,,	,,
mls. yds.			
1 hr. (s.) 126 1466	126.83	Napier Railton (Cobb, Lewis, Richards and Paul)	,,
3 hrs. (s.) 372 1734	124.33	,, ,,	,,
6 hrs. (s.) 735 1316	122.62	,, ,,	,,
12 hrs. (s.)	107.49	Renault (Garfield, Plessier and Guillon)	,,
24 hrs. (s.)	107.90	,, ,,	,,

INTERNATIONAL CLASS B.—5,001—8,000 c.c.

Record.	Speed. m.p.h.	Car and Drivers.	Track.
1 kilometre (s.)	77.82	Panhard (M. Dore)	Arpajon
1 ,, (f.)	138.47	Panhard (M. Dore)	,,
1 mile (s.)	90.59	Panhard (M. Dore)	,,
1 ,, (f.)	137.61	Panhard (M. Dore)	,,
5 kilometres (f.)	139.84	Panhard (Breton)	Montlhéry
5 miles (f.)	138.78	Panhard (Breton)	,,
10 kilometres (f.)	138.95	Panhard (Breton)	,,
10 miles (f.)	126.03	Leyland (J. G. P. Thomas)	Brooklands
50 kilometres (s.)	133.64	Panhard (Eyston)	Montlhéry
100 ,, (s.)	134.73	,, ,,	,,
200 ,, (s.)	131.14	,, ,,	,,
500 ,, (s.)	113.12	Auburn (Miller)	Murock
1,000 ,, (s.)	110.81	,, ,,	,,
2,000 ,, (s.)	105.93	,, (Miller and Wilcox)	,,
3,000 ,, (s.)	86.47	Graham-Paige (Tulloch, Marendaz and Veendam)	Montlhéry
4,000 ,, (s.)	68.58	Studebaker (A. Gulotta, C. Bergere and Keiger)	Atlantic City
5,000-45,000kls. (s.)	From 68.71-68.28	,, ,,	,,
50 miles (s.)	134.62	Panhard (Eyston)	Montlhéry
100 ,, (s.)	131.67	,, ,,	,,
200 ,, (s.)	112.93	Auburn (Miller)	Murock
500 ,, (s.)	113.38	,, ,,	,,
1,000 ,, (s.)	109.30	,, (Miller and Wilcox)	,,
2,000 ,, (s.)	86.69	Graham-Paige (A. G. Tulloch, D. M. K. Marendaz and E. Veendam)	Montlhéry
3,000-30,000 mls. (s.)	From 68.70-68.36	Studebaker (Gulotta, Gleason, etc.	Atlantic City
mls. yds.			
1 hr. (s.) 130 1265	130.73	Panhard (Eyston)	Montlhéry
3 hrs. (s.) 339 722	113.14	Auburn (Miller)	Murock
6 hrs. (s.) 664 810	110.75	,, ,,	,,
12 hrs. (s.) 1269 1742	105.83	,, (Miller and Wilcox)	,,
24 hrs. (s.) 2072 1126	86.36	Graham-Paige (Tulloch, Marendaz and Veendam)	Montlhéry

INTERNATIONAL CLASS C.—3,001-5,000 c.c.

Record.	Speed. m.p.h.	Car and Drivers.	Track.
1 kilometre (s.)	85.57	Sunbeam (K. Don)	Brooklands
1 ,, (f.)	148.70	Union 76 Special (Hartz)	Murock

Record.	mls.	yds.	Speed. m.p.h	Car and Drivers.	Track.
1 mile (s.)			100.77	Sunbeam (Don)	Brooklands
1 ,, (f.)			151.10	Union 76 Special (Hartiz)	Murock
5 kilometres (f.)			145.93	,, ,,	,,
5 miles (f.)			147.45	,, (Frame)	,,
10 kilometres (f.)			152.90	Maserati (Borzacchini)	Cremona
10 miles (f.)			146.71	Union 76 Special (Hartz)	Murock
50 kilometres (s.)			136.52	,, (Frame)	,,
100 ,, (s.)			124.45	Sunbeam (Don)	Brooklands
200 ,, (s.)			122.36	Bugatti (Don and Eyston)	Montlhéry)
500 ,, (s.)			117.80	Delage (Don ,Eyston, Eldridge, Frettet, Denly)	Montlhéry)
1,000 ,, (s.)			117.01	,, ,,	,,
2,000 ,, (s.)			116.08	,, ,,	,,
3,000 ,, (s.)			97.22	Delage (Bourlier, Frettet and Senechal)	,,
4,000 ,, (s.)			83.41	Hotchkiss (Tchernousky and Vasselle)	,,
5,000 ,, (s.)			83.57	,, ,,	,,
10,000 ,, (s.)			77.73	Ford (C. and L. Marchand, Fortin, Combettes, Présalé, Vaillant and Berteaux)	,,
15,000 ,, (s.)			78.06	,, ,,	,,
20,000 ,, (s.)			78.08	,, ,,	,,
30-40,000 ,, (s.)			65.85	Hotchkiss (Tchernousky, Vasselle, etc.)	,,
50 miles (s.)			139.61	Union 76 Special (Frame)	Murock
100 ,, (s.)			123.74	Sunbeam (Don)	Brooklands
200 ,, (s.)			117.59	Delage (Eyston and Denly)	Montlhéry
500 ,, (s.)			116.73	Delage (Don, Eyston, Eldridge, Frettet, Denly)	,,
1,000 ,, (s.)			116.36	,, ,,	,,
2,000 ,, (s.)			97.43	Delage (Bourlier, Senechal and Frettet)	,,
3,000 ,, (s.)			83.40	Hotchkiss (Tchernousky, Vasselle, etc.)	,,
4,000 ,, (s.)			83.40	,, ,,	,,
5,000 ,, (s.)			77.84	Ford (C. and L. Marchand and others)	,,
10,000 miles (s.)			78.01	Ford (C. and L. Marchand and others)	Montlhéry
15-25,000 ,, (s.)			From 65.85 upwards	Hotchkiss (Tchernousky, Vasselle, etc.)	,,
1 hr. (s.)	123	23	123.01	Bugatti (Eyston)	,,
3 hrs.(s.)	353	866	117.83	Delage (Don, Eyston, Eldridge, Frettet, Denly)	,,
6 hrs.(s.)	702	1247	117.12	,, ,,	,,
12 hrs. (s.)	1345	78	112.09	,, ,,	,,
24 hrs.(s.)	2292	505	95.52	Delage (Bourlier, Senechal and Frettet)	,,
2 days (s.)			82.62	Hotchkiss (Tchernousky, Vasselle, etc.)	,,
3-7 days (s.)			77.57 78.05	Ford (C. & L. Marchand, etc.)	,, ,,
8-16 days (s.)			65.90	Hotchkiss (Tchernousky, Vasselle, etc.)	,,

INTERNATIONAL CLASS D.—2,001-3,000 c.c.

1 kilometre (s.)			88.33	Maserati (Ruesch)	Montlhéry
1 ,, (f.)			131.22	Bugatti (Divo)	,,
1 mile (s.)			91.65	Bugatti (Hartmann)	Tat
1 ,, (f.)			131.22	Bugatti (Divo)	Montlhéry
5 kilometres (f.)			131.03	Bugatti (Divo)	,,
5 miles (f.)			126.85	Sunbeam (J. Dunfee)	,,
10 kilometres (f.)			138.77	Alfa-Romeo (Brilli Peri)	Cremona
10 miles (f.)			126.48	Sunbeam (J. Dunfee)	Montlhéry
50 kilometres (s.)			130.50	Maserati (Zehender)	,,
100 ,, (s.)			131.78	,, ,,	,,
200 ,, (s.)			124.67	Bugatti (Divo)	,,
500 ,, (s.)			119.98	Bugatti (Divo and Chiron)	,,
1,000 ,, (s.)			104.76	Talbot (B. E. Lewis and J. S. Hindmarsh)	Brooklands
2,000 ,, (s.)			100.23	Bentley (W. Barnato, J. D. Benjafield & F. Clement)	Montlhéry
3,000 ,, (s.)			94.86	Bentley (J. F. Duff and W. Barnato)	,,
4,000 ,, (s.)			80.75	Citroen (Y. Boillot and others)	,,
5,000 ,, (s.)			80.82	,, ,,	,,
10,000 ,, (s.)			81.02	,, ,,	,,
15,000 ,, (s.)			81.87	,, ,,	,,
20,000 ,, (s.)			81.97	,, ,,	,,
25-130,000 (s.)			64.84	,, (Marchand and others)	,,
50 miles (s.)			131.47	Maserati (Zehender)	,,
100 ,, (s.)			132.43	,, ,,	,,
200 ,, (s.)			118.00	Bugatti (Divo and Chiron)	,,
500 ,, (s.)			119.24	Bugatti (Divo and Chiron)	,,
1,000 ,, (s.)			101.56	Bentley (Barnato, Duller and Clement)	,,
2,000 ,, (s.)			94.83	Bentley (Duff and Barnato)	,,
3,000 ,, (s.)			80.72	Citroen (Y. Boillot and others)	,,
4,000 ,, (s.)			81.28	,, ,,	,,
5,000 ,, (s.)			81.78	,, ,,	,,
10,000 ,, (s.)			81.88	,, ,,	,,
15-80,000 (s.)			64.84	,, (Marchand and others)	,,
	mls.	yds.			
1 hr. (s.)	124	1196	124.68	Bugatti (Divo)	,,
3 hrs.(s.)	361	1614	120.64	Bugatti (Divo and Chiron)	,,
6 hrs.(s.)	628	1104	104.77	Talbot (Lewis & Hindmarsh)	Brooklands
12 hrs.(s.)	1211	952	100.96	Bentley (Barnato, Duller and Clement)	Montlhéry
24 hrs.(s.)	2280	1113	95.03	Bentley (Barnato and Duff)	,,
2-7 days (s.)			81.31- 81.29	Citroen (Y. Boillot and others)	,,

INTERNATIONAL CLASS E.—1,501-2,000 c.c.

Record.	mls.	yds.	Speed. m.p.h.	Car and Drivers.	Track.
1 kilometre (s.)			83.44	Bugatti (Prince F. Liechtenstein)	...Tat
1 ,, (f.)			143.29	Derby Special (Mrs. Stewart)	Montlhéry
1 mile (s.)			94.01	Bugatti (Prince F. Liechtenstein)	Tat
1 ,, (f.)			143.29	Derby Special (Mrs. Stewart)	Montlhéry
5 kilometres (f.)			139.81	Derby-Miller (Mrs. G. M. Stewart)	,,
5 miles (f.)			139.41	,, ,,	,,
10 kilometres (f.)			139.49	,, ,,	,,
10 ,, (f.)			138.34	Derby-Special (Mrs. Stewart)	,,
50 ,, (s.)			126.83	,, ,,	,,
100 ,, (s.)			128.16	,, ,,	,,
200 ,, (s.)			121.75	,, ,,	,,
500 ,, (s.)			109.67	Sunbeam (J. Dunfee and P. Bamber)	,,
1,000 ,, (s.)			101.55	Hotchkiss (Eyston, Vasselle and Denly)	,,
1,000 ,, (s.)			94.98	Alfa-Romeo (Chinetti, Zehender and Pesato)	,,
3,000 ,, (s.)			95.89	,, ,,	,,
4,000 ,, (s.)			93.75	,, ,,	,,
5,000 ,,			93.84	Alfa-Romeo (Chinetti, Pesato and Zehender)	Montlhéry
10,000 ,,			77.39	A.C. (Mr. & Mrs. Bruce)	,,
15,000 ,,			75.73	,, ,,	,,
20,000 ,,			66.76	A.C. (Mr. & Mrs. Bruce and Joyce)	,,
50 miles (s.)			127.97	Derby-Miller (Mrs. G. M. Stewart)	,,
100 ,, (s.)			121.64	,, ,,	,,
200 ,, (s.)			117.67	Sunbeam (J. Dunfee and P. Bamber)	,,
500 ,, (s.)			101.13	Hotchkiss (Eyston, Vasselle and Denly)	,,
1,000 ,, (s.)			97.40	,, ,,	,,
2,000 ,, (s.)			96.04	Alfa-Romeo (Chinetti, Zehender and Pesato)	,,
3,000 ,,			94.34	Alfa-Romeo (Chinetti, Pesato and Zehender)	,,
4,000 ,,			93.97	,, ,,	,,
5,000 ,,			78.13	A.C. (Mr. & Mrs. Bruce)	,,
10,000 ,,			66.44	A.C. (Mr. & Mrs. Bruce)	,,
15,000 ,,			68.01	A.C. (Mr. & Mrs. Bruce and Joyce)	,,
	mls.	yds.			
1 hr. (s.)	121	1324	121.75	Derby-Miller (Mrs. G. M. Stewart)	,,
3 hrs.(s.)	328	1120	109.54	Sunbeam (J. Dunfee and P. Bamber)	,,
6 hrs.(s.)	609	41	101.50	Hotchkiss (Eyston, Vasselle and Denly)	,,
6 hrs.(s.)	584	482	97.38	Alfa-Romeo (Chinetti, Zehender and Pesato)	,,
12 hrs.(s).	1163	873	96.96	,, ,,	,,
24 hrs.(s.)	2301	417	95.88	,, ,,	,,
2 days			94.40	,, ,,	,,
3 days			62.67	Singer (G. E. T. Eyston, E. A. D. Eldridge, P. Brewster and A. W. Denly)	,,
4 days			62.51	,, ,,	,,

INTERNATIONAL CLASS F.—1,101-1,500 c.c.

1 kilometre (s.)			83.09	Amilcar (A. Morel)	Arpajon
1 ,, (f.)			143.30	Packard Cable Sp. (L. Duray)	,,
1 mile (s.)			92.33	Talbot (A. Divo)	,,
1 ,, (f.)			164.01	Miller (F. Lockhart)	Murock
5 kilometres (f.)			139.54	Packard Cable Sp. (L. Duray)	Montlhéry
5 miles (s.)			139.22	,, ,,	,,
10 kilometres (f.)			138.92	,, ,,	,,
10 miles (f.)			135.33	,, ,,	,,
50 kilometres (s.)			120.06	Miller (E. A. D. Eldridge)	,,
100 ,, (s.)			122.46	,, ,,	,,
200 ,, (s.)			118.88	Bugatti (Veyron)	,,
500 ,, (s.)			112.37	Riley (Eyston and Maclure)	,,
1,000 ,, (s.)			107.60	Bugatti (Veyron)	,,
2,000 ,, (s.)			91.68	Riley (Eyston, Denly and McClure)	,,
3,000 ,, (s.)			82.54	,, ,,	,,
4,000 ,, (s.)			61.87	Citroen (Marchand and others)	,,
5,000 ,, (s.)			61.68	,, ,,	,,
10,000 ,, (s.)			61.87	,, ,,	,,
15-300,000 ,, (s.)			58.95- 58.08	,, ,,	,,
50 miles (s.)			121.88	Miller (Eldridge)	,,
100 ,, (s.)			119.01	Bugatti (Veyron)	,,
200 ,, (s.)			116.49	,, ,,	,,
500 ,, (s.)			110.53	Riley (Eyston and Maclure)	,,
1,000 ,, (s.)			95.24	Alvis (Cushman and Harvey)	Brooklands
2,000 ,, (s.)			69.00	Delage (Scott, Payn and Rose-Richards)	Montlhéry
3,000 ,, (s.)			61.72	Citron (Marchand and others)	Montlhéry
4,000 ,, (s.)			61.74	,, ,,	,,
5,000 ,, (s.)			61.85	,, ,,	,,
10-180,000 (s-)			58.21- 57.97	,, ,,	,,
	mls.	yds.			
1 hr. (s.)	119	26	119.01	Bugatti (Veyron)	,,
3 hrs.(s.)	337	465	112.42	Riley (Eyston and McClure	,,
6 hrs.(s.)	645	276	107.52	Bugatti (Veyron)	,,
12 hrs.(s.)	1113	1443	92.82	Riley (Eyston, Denly and McClure)	,,
24 hrs.(s.)	1977	1388	82.41	,, ,,	,,
2-133 days (s.)			61.71- 58.07	Citroen (Marchand and others)	,,

INTERNATIONAL CLASS G.—751-1,100 c.c.

Record.	mls.	yds.	Speed. m.p.h.	Car and Drivers.	Track.
1 kilometre (s.)			78.34	Amilcar (C. Martin)	Arpajon
1 ,, (f.)			128.55	Amilcar (A. Morel)	Montlhéry
1 mile (s.)			74.57	Amilcar (Clayton)	Brooklands
1 ,, (f.)			128.02	Amilcar (A. Morel)	Montlhéry
5 kilometres (f.)			127.63	,, ,,	,,
5 miles (f.)			127.24	,, ,,	,,
10 kilometres (f.)			127.11	,, ,,	,,
10 miles (f.)			126.89	,, ,,	,,
50 kilometres (s.)			113.07	Amilcar (Widengren)	,,
100 ,, (s.)			113.91	,, ,,	,,
200 ,, (s.)			115.56	,, ,,	,,
500 ,, (s.)			104.09	Riley (G. Eyston and A. Denly)	Montlhéry
1,000 ,, (s.)			99.26	,, ,,	,,
2,000 ,, (s.)			85.43	Amilcar (Duray and de Gavardie)	,,
3,000 ,, (s.)			84.95	,, ,,	,,
4,000 ,, (s.)			64.85	Riley (Eyston and Eldridge)	,,
5,000 ,, (s.)			64.39	,, ,,	,,
10,000 ,, (s.)			51.20	,, ,,	,,
15,000 ,, (s.)			48.97	,, ,,	,,
50 miles (s.)			113.67	Amil car (Widengren)	,,
100 ,, (s.)			114.89	,, ,,	,,
200 ,, (s.)			104.20	Riley (G. Eyston & A. Denly)	,,
500 ,, (s.)			98.18	,, ,,	,,
1,000 ,, (s.)			85.33	Amilcar (Duray and de Gavardie)	,,
2,000 ,, (s.)			85.0	,, ,,	,,
3,000 ,, (s.)			64.44	Riley (Eyston and Eldridge)	,,
4,000 ,, (s.)			50.80	,, ,,	,,
5,000 ,, (s.)			50.78	,, ,,	,,
10,000 ,, (s.)			49.18	,, ,,	,,
1 hr. (s.)	115	561	115.32	Amilcar (Widengren)	,,
3 hrs. (s.)	312	464	104.09	Riley (Eyston and Eldridge)	,,
6 hrs. (s.)	504	692	99.07	,, ,,	,,
12 hrs. (s.)			85.44	Amilcar (Duray and de Gavardie)	,,
24 hrs. (s.)			85.0	Amilcar (Gavardie and Duray)	,,
2 days			64.37	Riley (Eyston and Eldridge)	,,

INTERNATIONAL CLASS H.—501-750 c.c.

Record.	mls.	yds.	Speed. m.p.h.	Car and Drivers.	Track.
1 kilometre (s.)			67.21	M.G. (Hall)	Brooklands
1 ,, (f.)			128.62	M.G. (Denly)	Montlhéry
1 mile (s.)			74.74	M.G. (Hall)	Brooklands
1 ,, (f.)			128.62	M.G. (Denly)	Montlhéry
5 kilometres (f.)			128.50	,, ,,	,,
5 miles (f.)			128.08	,, ,,	,,
10 kilometres (f.)			127.45	,, ,,	,,
10 miles (f.)			125.56	,, ,,	,,
50 kilometres (s.)			115.00	,, ,,	,,
100 ,, (s.)			113.50	,, ,,	,,
200 ,, (s.)			95.52	M.G. (Eyston and Denly)	,,
500 ,, (s.)			91.77	,, ,,	,,
1,000 ,, (s.)			91.77	,, ,,	,,
2,000 ,, (s.)			69.95	M.G. (Eyston, Denly and Wisdom)	,,
50 miles (s.)			114.47	M.G. (Denly)	Montlhéry
100 ,, (s.)			111.17	,, ,,	,,
200 ,, (s.)			95.02	M.G. (Eyston and Denly)	,,
500 ,, (s.)			92.50	,, ,,	,,
1,000 ,, (s.)			88.36	,, ,,	,,
2,000 ,, (s.)			69.95	M.G. (Eyston, Denly and Wisdom)	,,
1 hr. (s.)	110	1495	110.85	M.G. (Denly)	,,
3 hrs. (s.)	283	1344	94.59	M.G. (Denly and Eyston)	,,
6 hrs. (s.)	556	1341	92.79	,, ,,	,,
12 hrs. (s.)	1040	131	86.67	,, ,,	,,
24 hrs. (s.)	1694	1126	70.61	M.G. (Eyston, Denly and Wisdom)	,,

INTERNATIONAL CLASS I.—351-500 c.c.

Record.	mls.	yds.	Speed. m.p.h.	Car and Drivers.	Track.
1 kilometre (s.)			55.83	D. K. W. Silton Special (V. de Strasser Silton)	Neunkirchen
1 ,, (f.)			84.58	De Rovin (De Rovin)	Arpajon
1 mile (s.)			59.89	D.K.W. Silton Special (V. de Strasser Silton)	Tat
5 kilometres (f.)			83.97	de Rovin (de Rovin)	Montlhéry
5 miles (f.)			82.49	,, ,,	,,
10 kilometres (f.)			82.73	,, ,,	,,
10 miles (f.)			81.91	,, ,,	,,
50 kilometres (s.)			79.88	Standard (von Fuchsenfeld and Meyer)	,,
100 ,, (s.)			78.82	,, ,,	,,
200 ,, (s.)			68.63	D.K.W. (von Fuchsenfeld and Meyer)	Montlhéry
500 ,, (s.)			68.30	Standard (von Fuchsenfeid and Meyer)	,,
1,000 ,, (s.)			63.95	D.K.W. (von Fuchsenfeld and Meyer)	,,
2,000 ,, (s.)			61.08	,, ,,	,,
50 miles (s.)			80.27	Standard (von Fuchsenfeld and Meyer)	,,
100 ,, (s.)			68.56	D.K.W. (von Fuchsenfeld and Meyer)	,,
200 ,, (s.)			66.84	,, ,,	,,
500 ,, (s.)			64.57	,, ,,	,,
1,000 ,, (s.)			62.56	,, ,,	,,
1 hr. (s).	74	700	74.44	de Rovin (de Rovin)	,,
3 hrs. (s.)	200	923	66.84	D.K.W. (von Fuchsenfeld and Meyer)	,,
6 hrs. (s.)	406	339	67.70	Standard (von Fuchsenfeld and Meyer)	,,
12 hrs. (s.)	764	1429	63.65	D.K.W. (von Fuchsenfeld and Meyer)	,,
24 hrs. (s.)	1364	1065	56.85	,, ,,	,,

INTERNATIONAL CLASS J.—Up to 350 c.c.

Record.	mls.	yds.	Speed. m.p.h.	Car and Drivers.	Track.
1 kilometre (s.)			52.92	Jappic (H. M. Walters)	Brooklands
1 ,, (f.)			76.75	Jappic (Mrs. Stewart)	Arpajon
1 mile (s.)			58.12	Jappic (H. M. Walters)	Brooklands
1 ,, (f.)			75.44	Jappic (Mrs. Stewart)	Arpajon
5 kilometres (f.)			76.94	H.S. (W. D. Hawkes)	Montlhéry
5 miles (f.)			76.74	,, ,,	,,
10 kilometres (f.)			76.74	,, ,,	,,
10 miles (f.)			76.49	,, ,,	,,
50 kilometres (s.)			70.25	H.S. (Mrs. Stewart)	,,
100 ,, (s.)			70.88	,,	,,
200 ,, (s.)			62.93	Voran (R. Von Koenig-Fuchsenfeld)	,,
50 miles (s.)			70.73	H.S. (Mrs. Stewart)	,,
100 ,, (s.)			70.95	,,	,,
1 hr. (s.)	70	1672	70.91	,,	,,
3 hrs. (s.)	103	1670	34.65	Antony (Antony)	St. Germain
6 hrs. (s.)	171	1221	28.62	,, ,,	,,
12 hrs. (s.)	312	44	26.0	,, ,,	,,
24 hrs. (s.)	4821	416	20.12	,, ,,	,,

BROOKLANDS RECORDS.

Main Outer Circuit Lap Record.

Bentley (Sir H. Birkin)	137.96 m.p.h.

Mountain Circuit Lap Record.

Maserati (W. Straight)	78.29 m.p.h

CLASS RECORDS.

Main Outer Circuit.

Class A.	Napier-Railton (J. R. Cobb)	137.20 m.p.h.
,, B.	Panhard (G. E. T. Eyston)	131.76 m.p.h.
,, C.	Bentley (Sir H. Birkin)	137.96 m.p.h.
,, D.	Bugatti (Earl Howe)	125.45 m.p.h.
,, E.	Sunbeam (K. Don)	126.73 m.p.h.
,, F.	Delage (Earl Howe)	127.05 m.p.h.
,, G.	M.G. (R. T. Horton)	115.55 m.p.h.
,, H.	M.G. (R. T. Horton)	115.29 m.p.h.
Ladies' Record.	Leyland-Thomas (Mrs. T. H. Wisdom)	121.47 m.p.h.

Mountain Circuit.

Class A.	No record.	
,, B.	Mercédès-Benz (Sir M. Campbell)	73.89 m.p.h.
,, C.	Bugatti (G. E. T. Eyston)	76.03 m.p.h.
,, D.	Maserati (W. Straight)	78.29 m.p.h.
,, E.	Bugatti (T. A. S. O. Mathieson)	72.13 m.p.h.
,, F.	Riley (R. Mays)	74.68 m.p.h.
,, G	M.G. (W. Straight)	70.67 m.p.h.
,, H.	M.G. (H. C. Hamilton)	69.28 m.p.h.

British Double 12-Hour Record.

mls.	yds.	m.p.h.	
2082	1726	86.79	Bentley (J. F. Duff), Brooklands

Test Hill Record.

Cars.		Cyclecars.	
m.p.h.		m.p.h.	
32.444	Frazer Nash (R. G. J. Nash)	28.31	Frazer Nash (L. Cushman.

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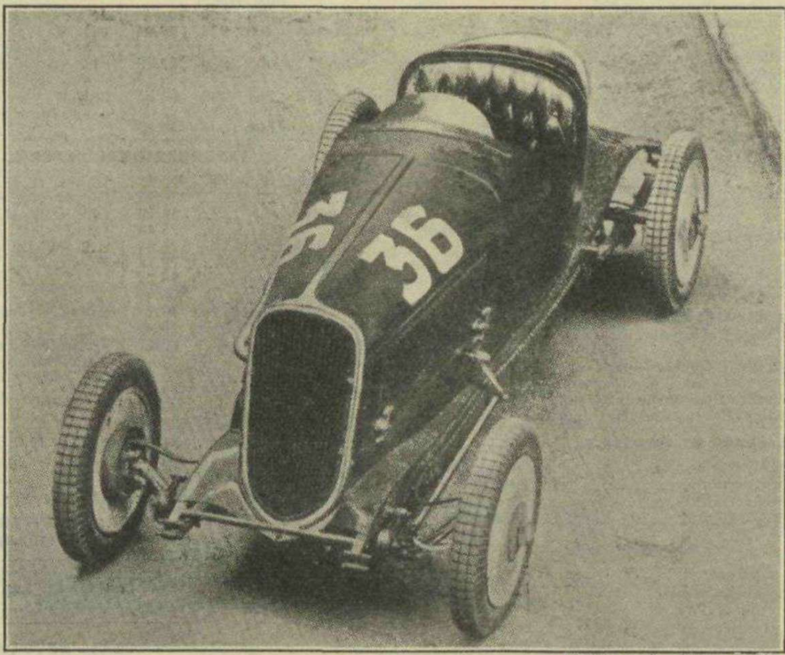
Supercharged Balilla Capable of Over 95 m.p.h.

TOURING-CAR design, especially in the smaller classes, has nowadays reached such a pitch of perfection that with a certain amount of tuning, the cheap utility vehicle can be made to give a thoroughly sporting performance. The sports type Balilla Fiat, a sturdy four-cylinder job with a three bearing crankshaft is very popular in Italy, and three of these 996 c.c. cars, fitted with attractive two-seater open bodies, put up an average of over 53 m.p.h. in the Italian 1,000 Miles Race. A similar car fitted with a high-compression Siata o.h.v. cylinder head and four speed gear-box was driven by Ambrosini and Menchetti, and completed the same course at 55.33 m.p.h. This car was fitted with a streamlined coupé body.

Ambrosini was so pleased with the performance of his Fiat Special that he decided to rebuild it as a racing car, and fitted it with a trim-looking single seater body. Using a supercharger in conjunction with the high-compression head, he succeeded in covering the flying kilometre at a speed of 145 k.p.m. (90 m.p.h.). Profiting by the experience which he had gained with the first car, he built another on the same lines, and entered it in the Monte Ceneri Hill-Climb. In the timed flying kilometre which begins the climb he put up a speed of 151 k.p.m., and at one point was doing 154, which is 96 m.p.h.



[Photograph—Motor Italia.

In racing trim, the Balilla Fiat modified by Ambrosini.

The horse-power of the Balilla engine was raised from 22 at 2,800 r.p.m. to 38 at 4,000 with the Siata head, while the use of a Roots-type supercharger brought it up to 48 h.p. at 4,800 r.p.m. The supercharger, which was chain-driven from the front of the engine and geared up 1.25 to 1, was mounted on the right side, and fitted with a Cozette carburettor. The compression ratio was 6.6 to 1. Coil ignition was used, with a coil larger than standard.

In order to improve streamlining there is no starting handle, but an electric starter and battery was fitted. Thermo-syphon cooling was used, and part of the radiator was blanked off. British components played their part in the success of the Balilla, for Castrol oil, K.L.G. sparking plugs and Rudge wheels were used. As will be seen, these were covered by aluminium discs.

A Siata 4 speed gear-box, which is specially made for sports Fiats, was used. The back axle ratio was 4 to 1.

The chassis is the standard Fiat production but the chassis members were curved inwards and joined at the back, and a stout cross-tube was used to carry the rear spring shackles.

The engine-gearbox unit was moved back 6 inches in the chassis, and the steering box was carried on the back of it with an extended shaft carrying the drop-arm. The steering wheel is of course in the middle of the car.

The body, as will be seen, is a neat single-seater, with a radiator guard, an undershield and a pointed tail. The exhaust pipe is carried round to the back. A 6½ gallon petrol tank is carried in the tail, and the car complete weighs just under 10 cwt.

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MEN BEHIND THE SCENES.

No. 3.

Mr. R. TANNER.

WHEN the thousands of workmen descended on the peace of Weybridge in the year 1907, their activities gave a tremendous amount of interest to the local inhabitants of this quiet Surrey village. Among those who used to walk over to see the progress of their work on the Brooklands Estate were a father and son, and as the great concrete track took shape before their eyes, motor-racing became the abiding subject for thought in the mind of the boy.

He longed for the track to be completed, so that he could see some of the machines that would come to do battle there, and meanwhile he immersed himself in the motoring books and publications of the time. At last the great day of the first meeting came, and he and a friend took up their places on a bank at the roadside. From this vantage point they took down the numbers of all the racing cars as they arrived, amid much noise, smoke and flame.

The boy's name was Reginald Tanner, and little did he realise at that date that in later years he would become a person of considerable importance to competitors in the Paddock of Brooklands, and in the world of motor-racing generally.

It was not until 1921 that Tanner entered the Anglo-American Oil Company, but hardly had he settled down than it was decided that a Competition's Department should be started. Tanner saw his chance and took it, and since its inception he has been in this section of "Pratts." Now he is the head of the department, and in this capacity is one of the best known (and best liked) figures at all motor-racing gatherings, whether it be the Monaco Grand Prix, the R.A.C. Rally, or the T.T.

Reginald Tanner owes a lot of his success to a genuine love of the motor-racing game (of which more anon), and this keenness reacts on all those with whom he comes in contact. Added to this he is thoroughness personified, so that competitors can depend upon his assistance without the slightest misgiving—a vital factor in the last minute rush before an event.

About that keenness of his, some idea of its strength can be gained by the fact that Tanner's annual holiday is of the "busman" character—to wit, he participates each year in the Monte Carlo Rally. He has been through three so far, once on a Singer, then on a Talbot, and last year on an M.G. Midget.

This year he is going on a Triumph, from Tallinn, and the best wishes of all those with whom he has come in contact will go with this popular "Man Behind the Scenes."

IS THE DIESEL THE ENGINE OF THE FUTURE?

Two expert's views on the subject.

"WITHIN the next few years, Diesel cars will reduce the cost of motoring to half or one-third its present figure," is the opinion of G. E. T. Eyston, who recently set up a world's record in a Diesel racer at Brooklands.

"Thanks to its economy, the Diesel engine is now widely used in commercial vehicles, and I see no reason why the same economy should not be possible on private cars."

How to save engine weight is the problem facing Diesel engineers. Weight reduction demands still more efficient lubrication at temperatures far higher than those of a petrol engine under stresses that are much more severe. According to Mr. E. A. Evans, Chief Chemist of the Wakefield Company, who have for years been investigating the special problems of Diesel lubrication, the need for high-grade lubricating oil is even more important than on a petrol driven engine.

During early trials of the first Diesel-engined motor vehicles on "economical" oil, so much sludge was formed that the oil "could be *dug* out of the crankcase after a few thousand miles."

"Another serious problem is dilution," he said. "In a Diesel engine the lubricating oil is specially liable to become diluted, and in time unfit for use, as there is a tendency to incomplete combustion. With a petrol engine, except when starting up from cold, nothing is to be gained by using an over-rich mixture. With a Diesel engine, on the other hand, the richer the mixture the greater the power up to a point, and the greater the danger of oil dilution.

"A petrol engine runs at full compression only when the throttle is wide open. By its nature, however, a Diesel engine must run at full compression even when it is ticking over. It has in consequence normally to withstand a stress which in its intensity can be compared only with the stress imposed upon the engine of a racing car.

"And yet it is impossible to use a heavy grade lubricating oil to stand up to these stresses, for heavy oil plus the very much higher compression would make the engine all but immovable on a cold morning. This imposes demands upon the lubrication that are in fact almost diametrically opposed to each other."

Oil Charts.

Any owners of Armstrong Siddeley, Morris, Ford, and Austin Cars (1933 models), who have not yet received a free Lubrication Chart can have one immediately by applying to the Filtrate Works, Leeds.

The Charts are mounted on strong paper varnished and eyeletted ready for hanging up in the garage, and in all cases have been checked and passed by the motor manufacturers concerned.

Incidentally, a new oil specially intended for synchromesh gearboxes has been introduced by Messrs. E. Joy & Sons, Ltd., known as Synchro "Filtrate."

British Cars' Success in Australia.

For the third year out of the last four, a team of Triumph light cars has won the premier motoring award in New South Wales, the Wakefield Trophy.

The trophy is offered annually for the best performance of a team of these cars in ten different contests. It was secured by Triumphs in 1930, with 7 first, 9 seconds and 3 thirds out of ten events. In 1931 they lost the trophy by two points only, but they regained it in 1932. This year's success was achieved with 10 h.p. cars.

Chiron joins Hispano-Suiza.

Louis Chiron was to be seen in October at the Paris Salon on the stand of Hispano-Suiza. It appears that he has joined the famous French Company with the particular purpose of developing the sales of the 54 h.p. 12 cylinder model—the chassis of which, incidentally, was one of the outstanding exhibits at Olympia. Apparently his new activities will not in any way hinder him from racing next season.

Lord Howe gives his Impressions of the Coming Racing Season

(In an interview)

TO the keen follower of motor sport, the prospects for motor racing on the Continent during the coming season seem decidedly exciting. We therefore decided to approach Lord Howe, who of course possesses a wide knowledge of the activities of the various racing-car factories, combined with a practical experience of the majority of European racing circuits, and to obtain his views on the matter.

The activities of the Alfa Romeo factory are at present very much in the news. Lord Howe himself had ordered aMonoposto for next season, but only a few days before our interview his deposit money had been returned, together with a letter from the directors saying that the single-seater cars were only to be supplied to Italian drivers residing in their own country.

We asked him how the single-seaters handled, but he replied that he had never had an opportunity of driving one. His most abiding impression was obtained when he was watching Nuvolari during the practise for the 1932 French Grand Prix. The Italian driver was passing the pits at high speed, when suddenly the front of the car slewed across the road, and Lord Howe hastily dived for cover behind the pit counter. The skid was corrected almost instantly, but when such an incident occurs on a well-surfaced and straight road, it shows the amount of concentration required to hold a straight course.

Discussing the question of driving the single-seater racing cars developed by the new rules with the head of a famous foreign marque, whose products at one time ruled the race tracks of Europe, they both agreed that there were not more than half a dozen drivers of the Nuvolari calibre, capable of holding these ultra light cars at speeds approaching 160 m.p.h.

After the French Grand Prix, acting on the suggestion of Caracciola, blocks of lead ballast were fitted over the rear axles of the Monopostos, which made them a little easier to handle, and as will be seen on another page of this journal, the 1934 Type B cars have been lengthened and their weight has gone up.

" My own idea is that Grand Prix racing in 1934 will be nearly as dangerous for the spectators as for the drivers ; and marshals, photographers, and other folk who have to stand on the edge of the course would be wise to station themselves near a " funk-hole," where they can take refuge in the event of an uncorrected skid."

He did not think that any steps to modify regulations would be taken until at least some of the races had been held, which would show whether the single-seaters were as dangerous as might be imagined. The A.C.F., of course, were allowing two-seaters for the French Grand Prix. Therefore suggestions such as that of Chiron, that Grand Prix racing cars should be limited to unsupercharged engines of two-litre capacity and carrying two-seater bodies was rather premature. Two seater bodies could not of course be fitted to the Monopostos.

We ventured to ask Lord Howe whether mechanics would be carried if a return were made to two-seater bodies, but he assured us that the Continental organisers had found that carrying passengers merely entailed unnecessary loss of life, and that there was no prospect of this out-of-date regulation being revived.

The next point we raised was the selection of racing cars now available. Maserati, it appears, is overwhelmed with orders, but is the only firm with a tested production, and one would imagine that Lord Howe will probably secure one of these now that the Alfas cannot be obtained.

The 2.8 litre Bugatti appeared at the Spanish Grand Prix, and though it did not make an impressive showing, Lord Howe considered that the race was in the nature of an preliminary test. The cars have rather the appearance of a squat edition of the 4.9 car, slung as low as Lord Howe's famous 1,500 c.c. Delage. The rear wheels have radial spokes, which serve merely to counteract the effect of centrifugal force. The drive is taken from the brake-drums, which have serrated rims, and the wheel rims, which have corresponding internal serrations, fit over them. Another unusual feature is that the cars are started from the side, which allows the front dumb-irons to be faired in in accordance with aero-dynamic principles.

Lord Howe is of course interested in the 2.8 litre Mercédès, but few details have yet been divulged, except that it costs 100,000 Marks (£7,400) in Germany, which is a high price for an untried car. The Union Special is also being kept very secret, but Lord Howe does not fancy that it will hold the road any better than the other light single-seaters which will be seen next season.

His own plans are as yet indefinite, except that he has decided to take a team of M.G. Magnettes to Italy for the Italian 1,000 Miles Race. The Delage and the Bugatti are still going strong, and if he decides to get the Maserati he will have a busy season in front of him. In any case, all our readers will join us in wishing him the best of luck in the racing season of 1934.

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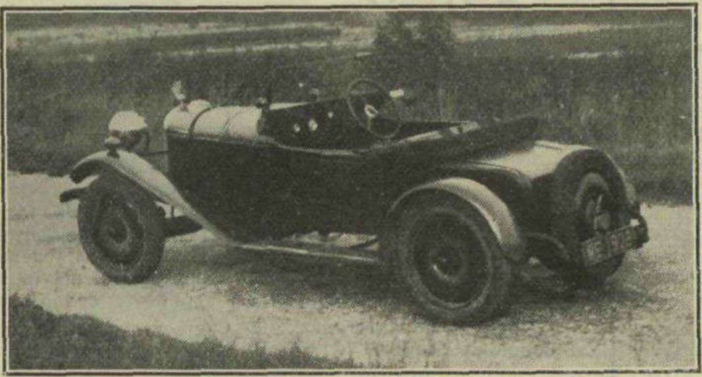
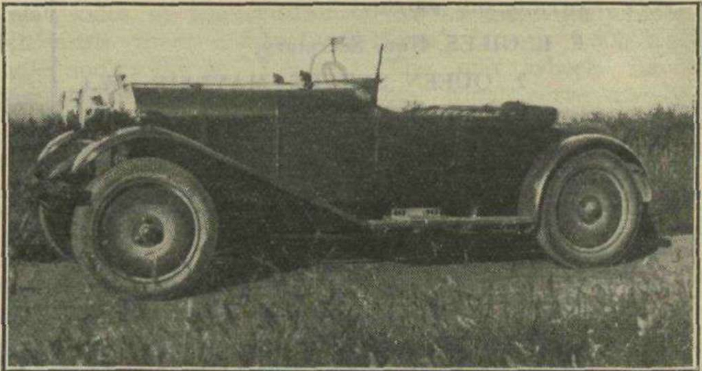


"M.E. 1928" is a Morris Cowley, that was first registered in March, 1922, and since it came into the possession of a friend of mine in 1927, it has been gradually changed from the standard two-seater of 1922 into the more modern looking vehicle here depicted.

First the old high pressure tyres were discarded and replaced by low pressure ones, the body was removed from the chassis, and a body from a Belsize-Bradshaw was obtained, complete with wings and bonnet for £3. All things considered, the fitting of this body was comparatively easy, once the rake of the steering had been increased. The springs were flattened, and the body slipped over the frame. The body sides fall about 2″ below the frame, and the seat is supported by planks which rest on the frame. The driving position is extremely comfortable, as there is ample leg room and the seat comes right forward under one's knees. The headlamps shown in the pohtograph were then purchased for 30s. (I later had them chromium plated, and they look frightfully expensive, though they are very inefficient owing to badly designed reflectors !)



Keeping pace with the times. "M.E. 1928" is still a pleasant looking motor-car.

A little later the body was covered with fabric and the engine rebored and light pistons fitted. It was then in 1929 that the car came into my possession, and after running it in carefully I found that I had a very amusing motor. It's acceleration was considerably better than any Cowley or Oxford I came across, but as it leapt about the road somewhat, I picked up a pair of Hartfords and fitted them to the rear, and a pair of rubber buffers were fitted between the front springs and the frame. About this time the front wings fell to pieces, and the ones shown in the photographs were made and fitted. Also, to clean up the tail, the spare wheel bracket shown was made ; it is bolted to the rear frame member, and the wheel and number plate attached by a large wing nut.

I still have "M.E. 1928," and in spite of the fact that it is nearly 12 years old, the engine is quite reasonably quiet, it is very smooth, and with the exception of second gear, the transmission is quiet too.

E. R. G. B.

HORTON'S SINGLE SEATER MIDGET.

In our last issue "Boanerges" stated that the design of the body of R. T. Horton's M.G. Midget was the work of Mr. Kesterton, of the S.U. Company. We have been asked by Jensen Motors to point out that the whole body and radiator was their design. It appears that Kesterton was advising Horton on carburetters at the time, and offered suggestions which the Jensen people greatly appreciated.

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Letters from Readers.

Road Death Statistics.

SIR,—The recent figures published by the Ministry of Transport show that out of 3,025 road fatalities in the first six months of this year, 1,171 occurred to pedestrians " crossing or running into the road."

The majority of these were due, admittedly, to the carelessness or thoughtlessness of the victims themselves. At the same time there is the possibility that the motorist involved in the accident, even though exonerated from blame, might have been able to save the situation if he had been more skilled and careful or if his car had had better brakes.

All British motor car manufacturers have for some years past aimed at safety first and foremost. We ourselves equip our cars with a transmission which enables the engine itself to be used as a powerful additional brake in an emergency. But all these safety factors will not secure safety unless the motorist keeps his eyes on the road and the pedestrian looks both up and down the road before he " crosses or runs into it."

The New Year is not far away. Here is a New Year Resolution for motorists and pedestrians alike: Reduce road dangers in 1934 by the exercise of care, common-sense and forethought.

I am, Yours, etc.,
THE DAIMLER COMPANY LTD.
R. N. AVELINE.
Coventry.

More About " Chitty-Chitty-Bang-Bang."

SIR,—May I be allowed to add a little first hand knowledge to the correspondence regarding " Whistling Rufus " and the " Chitty Chitty Bang Bangs."

The former I have never seen but the latter, or rather one of them, it has always been my desire to possess. Unfortunately my finances seem to wax and wane in sympathy with those of the lucky owners of these cars.

I had always thought that there were only two genuine Chittys. My first view of one was in 1930 when Chitty II. came into the hands of a dealer friend in London. It was sold to an enthusiast in Dover who had it completely overhauled and repainted. The R.A.C. rating is 72 h.p. This is unmistakeably Chitty II., as it has a four-seater touring body. There is a photograph of this car in " Wheels Take Wings " as raced at Brooklands. The present owner has consistently refused to sell at the brief periods when I have been in a position to buy. This car starts at once on the handle using the half compression.

Chitty I. was found near Canterbury, I believe, by two well known Mercédès enthusiasts and put in trim again. I examined this car carefully last year. It has a two-seater racing body and is sans wings, windscreen or silencer. In fact definitely a Brooklands car for there is little doubt that it is genuinely " Chitty I." The owner greatly prizes this car (which as you noted is now stored in London). The engine is slightly larger than that in Chitty II.

There is a third car which I do not think was ever a Chitty though similar in all respects. I saw this at a coachbuilders in London about the end of 1930—unfortunately one of my low-water periods. I was told that it had been left there by a customer unable to pay for the body which had been built. This was a two-seater with single dickey in the tail. There were a four piece V screen, chain guards, leather covered steering wheel rim, starter, motor and wings. The front wings ran up in a straight line from beside the cockpit and ended in sharp forward points. The aluminium bonnet was polished, and the body finished in yellow with black wings. This car started after a little trouble, a crowbar was used. It was sold soon afterwards but I saw it once at a filling station on the Great West Road last winter. It had been repainted then.

From an advertisement some months ago I was able to recognise this car as one offered for sale in Lancashire. I have not heard of it since.

These three cars were built up from pre-war 90 Mercédès chassis fitted with airship Maybach motors. I have two 90's myself and have compared chassis details. There is a Maybach motor of the type used in the Science Museum.

The third car had been stored for several years when first I saw it and may have been made for a friend of Count Zborowski.

I am, yours, etc.
B. BLYTHE.
25, Collingham Place,
Earl's Court, S.W.5.

Those Twelve Best Touring Cars.

SIR,—In Mr. Nicolson's letter in your last issue, he makes a list of cars which in his opinion are the twelve best touring cars in the world. May I suggest the Bugatti Royale Chassis with an open body.

I have not seen one of these models—there is to the best of my knowledge only one in the country, which belongs to a Captain C. W. Foster—but if the workmanship in this model is of the same quality as their racing machines I should certainly place it among the first dozen.

The facts I had about the Berliet come from a mechanic in the garage some six months before Mr. Boddy's letter—so perhaps there is some excuse for the inaccuracies.

I am, yours, etc.,
W. P. WOOD.
Ashtrees,
Billingham-on-Tees,
Co. Durham.

Two More "Possibles."

SIR,—Mr. Nicolson's list of the twelve best touring cars in your December issue is an interesting one, but I think that he has omitted two strong " possibles " in the 4½ litre Lagonda and the latest Speed Twenty Alvis. Both these cars are outstanding examples of modern automobile construction, and possess all those necessary virtues outlined by Mr. Nicolson.

But which cars of his list should be dropped in their favour is beyond me!

I am, yours etc.,
A. E. SMITH.
Ilford, Essex.

Reliability Trials.

SIR,—Your contributor, " Boanerges," once again has brought forward a point which has been troubling a number of us for some time past—the question of these tedious night sections in Reliability Trials.

It is true that still there are a number of enthusiasts who consider that a trial is not a real trial, unless it includes a two hundred mile journey by night with the possibility of unfavourable weather conditions. At the same time there are those of us who, as we grow a little older, wonder where the real point of the night section lies.

One finds little or no adventure in such a run and it is doubtful if there is any real camerarderie experienced whilst waiting an hour up a draughty side lane for the final check before breakfast. I think perhaps that the scheme which has on occasion been adopted by the Brighton and Hove Motor Club could be followed to advantage by other organising bodies, namely, that there should be two sections of the Trial.—The night run, run under trial schedule conditions for those who care to enjoy this phase of the Sport coupled with the Trial proper which starts in the observed section district the next morning for those who prefer a warm bed.

In order that the latter shall enjoy no advantage by reason of their greater freshness in the observed sections, it would be perhaps better to augment this plan by the donation of say two bonus marks for all those who undergo the night run.

The alternative is, of course, the scheme, as mentioned by Boanerges, and as adopted by the M.C.C. in their Sporting one day event. This example has already been followed by The Light Car Club in their Buxton to Buxton Trial.

It will be interesting to hear from the Organisers of Classic Trials such as the Barnstaple—The Brighton to Beer—The Liverpool £100, and the Gloucester Trials. as to whether they will consider this method of running the trials for 1934. These trials are now so well established that I do not think they need fear that their entry list will be effected.

From the Clubs points of view I should say that the scheme is worthy of consideration if only because of the minimising of the organisation necessary. It would be interesting in a way to hear from the Trials Secretary of the above mentioned Clubs as to the pros. and cons. of running Trials without the night section from their separate points of view.

I am, yours etc.,
R. GASPAR.
Coulsdon, Surrey.

NEWS FROM AMERICA

By

Our American Correspondent

T. MERIWETHER-SMITH

[By Courtsey of Ted Wilson, San Jose, Cal.

Billy Winn, seated in the car, is shown above receiving the Quinlan Trophy from Ralph Hankinson. Bob Sall, who won the Eastern A.A.A. Championship the same day, at Richmond, is standing to the right.

Rex Mays Wins at Ascot.

THE sensational 22-year old Rex Mays, driving his neat little Hispano Special, has displaced Ernie Triplett in the contest for the Pacific South West A.A.A. Championship, and has gained a most popular position with the thousands of motor race lovers in California. Mays captured three races during October and early November, and was placed high in two others, maintaining a slight advantage over Triplett, Al Gordon and Kelly Petillo, who follow him in that order, at this writing, in the title chase.

Gordon has been making rapid gains on Triplett and Mays however, and has a very slim chance of winning the sectional Championship. A little-known and inexperienced pilot, "Babe" Stanyer, was killed at Ascot in a terrible crash on October 29th.

Sall Awarded Eastern Title.

Bob Sall, Paterson, N.J., speeder, piloted his Vance Special to victory in a 5 mile heat at Richmond, Virginia, November 11th, and became the 1933 Eastern A.A.A. Champion. Sall, leading the feature race at the 15th lap, was forced out with a broken petrol line, and saw Billy Winn, of Missouri, go on to win the 30-lap race from Ken Fowler and Johnny Hannon. Winn was awarded the $1,000 Quinlan Trophy for being the most consistent winner on speedways under the control of Ralph Hankinson.

Sall's victory at Richmond was preceded by triumphs at Raleigh and Spartanburg, giving him sufficient points to pass Hannon in the sectional title race. Hannon has only recently recovered from injuries sustained at Mineola, Long Island.

California Road Race Plans.

Plans are rapidly taking shape for the return of road-racing to California. "Bill" Pickens, dean of American motor race publicity agents, William White, noted race-car manager, and a group of Los Angeles business men have completed details for two fine events. The first date mentioned was December 10th, but this has been postponed to February 22nd, 1934, in order to allow more time in which to construct course and grandstands.

The races will be run on a specially designed course at the Los Angeles Municipal Airport. The track will be over two miles in length, roughly oval shaped, with a hair-pin bend in the centre of the back stretch. There will be five sharp corners in the course, and the racing cars will be visible from the grandstands at all times.

The first race, held in the morning, will be a 200-mile stock-cars event, with no Championship point awards. There will be a 2-hour intermission between this event and the final 200-mile Championship race for strictly race cars. This event will decide the National A.A.A. Championship for 1933, as Louie Meyer, Lou Moore, Wilbur Shaw, and Chet Gardner are in a very close contest for the honour. Substantial prize money has been offered, and the Gilmore Oil Company has donated a gold loving-cup to the winner of the race car event.

Fred Wagner Passes.

It is with the deepest regret and sorrow that I record the death, on November 5th, of Fred "Pop" Wagner, aged 67, the starter of great American motor racing classics over a period of 25 years. Mr. Wagner was injured in January, 1932, and never completely recovered from the shock. He was beloved by all race drivers and officials, and his passing is deeply mourned in motor circles throughout the nation.

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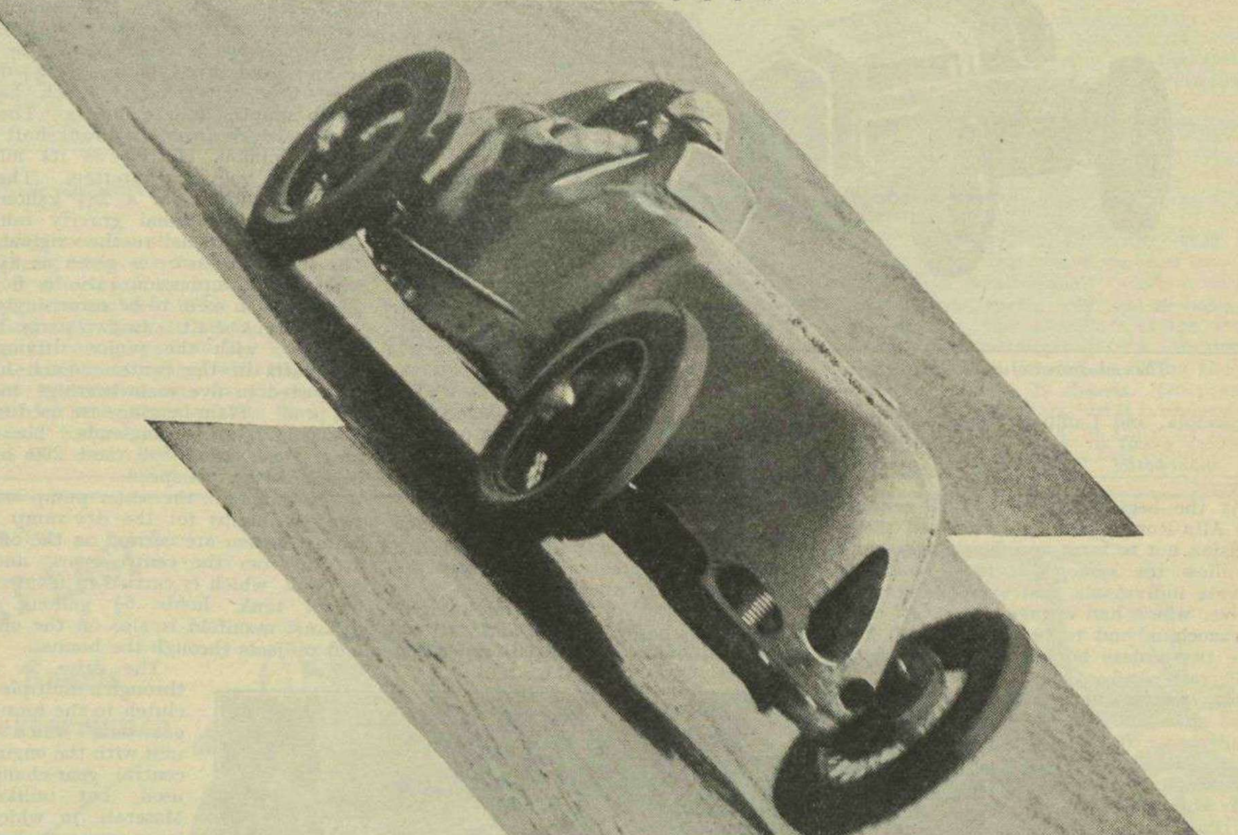

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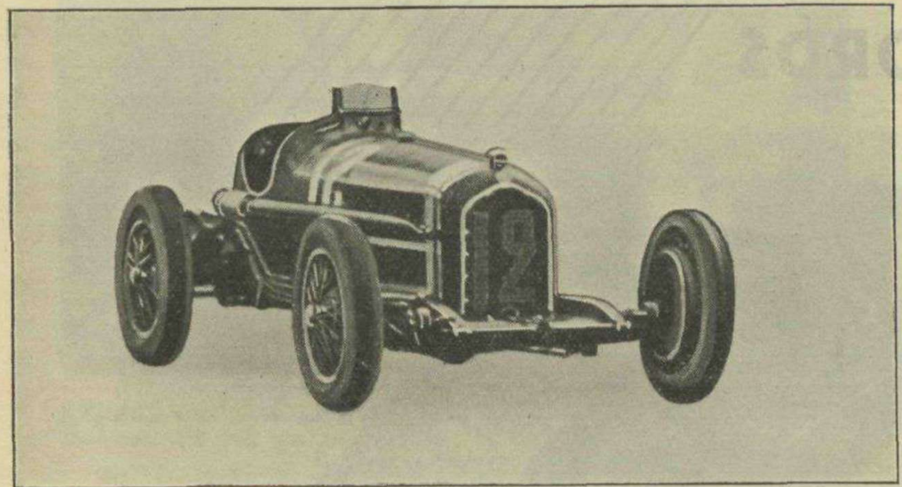
1934 RACING CARS

I.—THE MONOPOSTO ALFA ROMEO TYPE B.

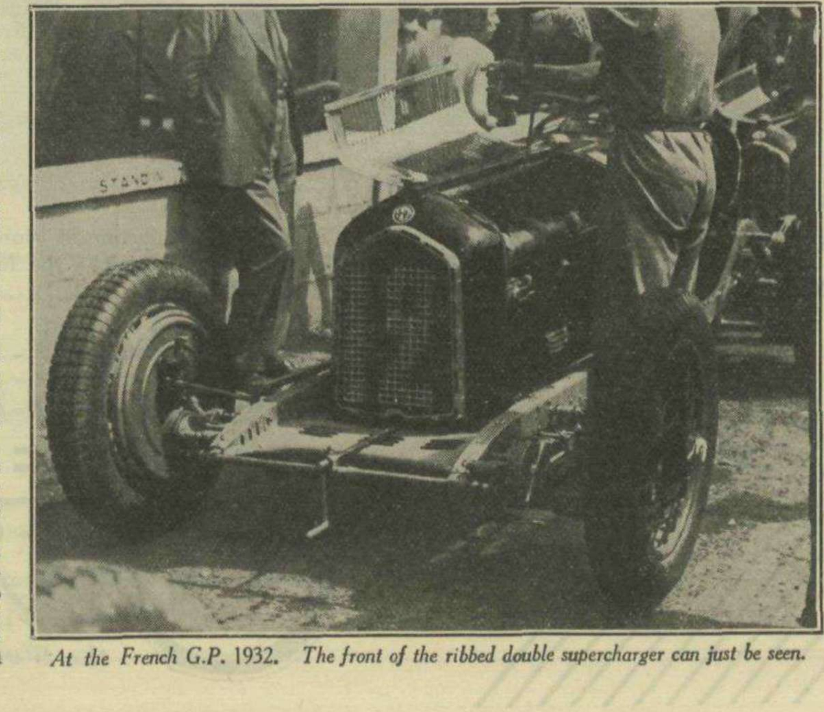
FROM its first appearance in 1932, when Nuvolari won the Italian Grand Prix at an average speed of 104 m.p.h., the single-seater 2.6 litre Alfa-Romeo "P.3" has carried all before it, and the works' drivers, Nuvolari, Borzacchini, Caracciola, and Campari were victorious in every event in which they took part. No *monopostos* were sold to private drivers.



The embodiment of speed. Three-quarter front view of the "P.3" Alfa-Romeo.

At the beginning of the 1933 season the Alfa-Romeo factory announced their decision not to form an official team, nor to allow the *monopostos* to be sold to private individuals, and even the Ferrari stable, which had engaged Nuvolari and Borzacchini, had to be content with 2.3 litre two-seaters bored out to 2.6 litres.

Ferrari and Count Trossi, who is the principal shareholder in the Scuderia, continued their efforts to secure the single-seaters, and were able to do so just in time for the Coppa Acerbo in August. Nuvolari meanwhile had transferred to the Maserati team, and Fagioli took his place. Nuvolari led for the greater part of the Acerbo race, but was delayed by a pit-stop, and Fagioli, who was in close pursuit, took the lead, and began the new series of victories for the single-seater. He and Chiron between them won the remaining Grand Prix events of the season.



At the French G.P. 1932. The front of the ribbed double supercharger can just be seen.

It was announced in October that twenty-five single-seaters were to be built for next season; then the programme was cut down to a batch of eight, which were to be supplied exclusively to the Scuderia Ferrari.

The latest information we have is that the six 1932 *monopostos* owned by the Ferrari stable will be bored out to 3,000 c.c., and will be run again in 1934, and that the construction of the new cars which will only be sold to Italian drivers, is about to begin, but that delivery will not take place much before May. Particulars of the new cars, which are called "Type B," are available, and they differ from the original series principally by reason of their greater weight and increased track and wheelbase.

The cylinders of the straight-eight engine have a bore of 65 mm and a stroke of 100 mm, giving a capacity of 2,600 c.c. They are cast in two blocks of four, with the camshaft drive coming up between them, and the blocks, crank-case, and sump are made of light alloy, elektron being used in the last named. Two overhead camshafts are used, and are driven at their mid-points by a train of gears from the crankshaft. There are two valves per cylinder, set at approximately 90° in a hemispherical head, and they seat direct on the aluminium. The cams bear on caps screwed on to the valve stems. The sparking plugs are disposed centrally between the valves, and the magneto is carried on the offside of the engine.

The *monoposto* differs from the two-seater Grand Prix type in having a double Roots-type supercharger, each half of which supplies four cylinders. The unit is gear-driven from the crankshaft by a central pinion, and draws its mixture from two Solex carburetters. The fuel is pressure-fed from a 28½ gallon rear tank. An additional gravity tank on the dash was fitted to the original cars. The blower pressure is given as 8½ lbs., while the compression ratio is 6 to 1, figures which seem to be surprisingly low.

The crank-shaft is in two parts, bolted together, with the pinion driving the camshafts in the centre. Each half is supported in five main-bearings, making ten in all. Plain bearings are used for the crankshaft and the big-ends. The maximum revs. are 5,500, and 200 h.p. is developed at this speed.

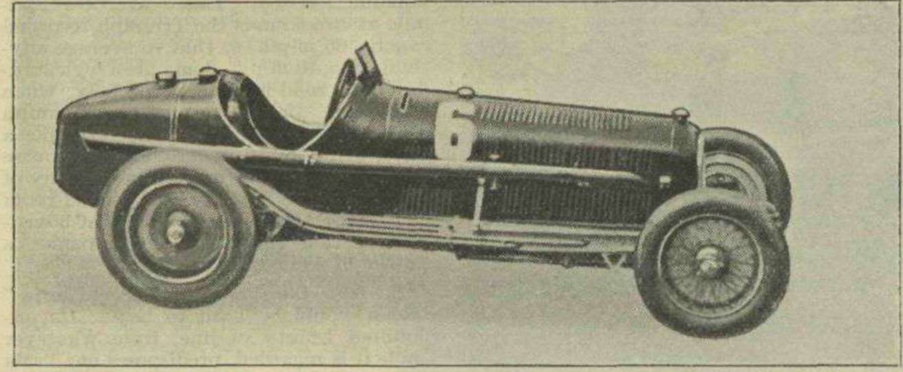
The magneto, the water pump and the two oil pumps for the dry-sump lubrication system are carried on the off-side, driven from the centre gears, and the oil tank, which is carried in front of the petrol tank, holds 5½ gallons. The exhaust manifold is also on the off-side, and projects through the bonnet.

The drive is taken through a multiple-plate clutch to the four-speed gear-box, which is in unit with the engine. A central gear-change is used, but unlike the Maserati, in which the lever comes up between the driver's legs, the rod is cranked to bring the knob to the near side, and the body is quite roomy. With characteristic modesty the Societa Alfa-Romeo claim as maximum speed 122 m.p.h. on top gear, 98 m.p.h. on third and 67 on second, but these must either be at conservative engine speeds or on a car fitted with an unusually low back-axle ratio, for in 1932 Nuvolari was reckoned to be doing 145 m.p.h. along the straight leg of the course in the French Grand Prix, and its maximum is

1934 RACING CARS—continued.

not far short of 155 m.p.h.

The famous double carden-shaft final drive has been retained. A housing mounted at the front end of the torque tubes contains a differential and two sets of two pinions by which the power is transmitted to the shafts. In the back-axle casing there are two live-shafts, one for each wheel, and each of them carries its own crown-wheel. The cardan-shafts run diagonally back to them, and there is a small enlargement of the back axle where each pinion meshes with its crown-wheel. The driver sits in the triangle formed by the cardan-shafts and the back-axle instead of being perched up on top of a central propellor shaft.



[*Motor Sport Photographs*

This off-side view shows some salient features of the Monoposto. Note the external pipes for cooling the oil.

The chassis runs almost straight back from the front dumb-irons to the rear spring-mountings, where it is swept steeply over the back-axle. Tubular cross-members are used. The springs are straight semi-elliptics underslung front and rear, damped by large disc shock-absorbers which are adjusted by means of wing-nuts. These will probably be supplemented on the 1934 cars by a set controlled from the driver's seat, as the 28 gallons of fuel forms a considerable proportion of the total weight of the car. The rear springs are carried on brackets outside the chassis members.

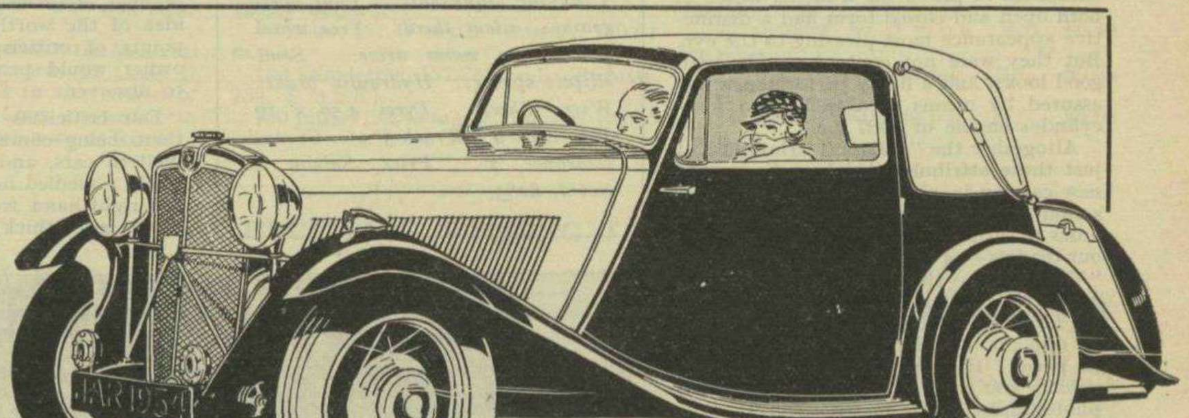
The front axle is tubular, and is steadied by torque arms running back to the chassis. The brakes are mechanically operated, with characteristic narrow ribbed drums 15 inches in diameter. The steering wheel is of course in the middle of the car and the steering box is carried at the back of the engine.

Light alloys are extensively used on the earlier *monopostos* for brake drums, shoes, back-axle casings, and even shock-absorbers arms.

In the end the cars were found to be almost too light, and for 1934, apart from some modification to the steering, the principal alteration is the increase in chassis dimension and consequently weight. It may be anticipated, therefore, that unless some additional power is found the new cars will be slightly slower than the old ones. The chassis weight incidentally is 12¾ cwt., and the ground clearance 7½ inches. Other variations in the dimensions are as follows :—

	1932 Monoposto.	Type B.
Wheelbase	8ft. 6in.	8ft. 10½in.
Track	4ft. 5in.	4ft. 7½in.
Weight	13¾ cwt.	15 cwts.

It is interesting to notice that the width of the track is more than half the wheelbase measurement, while taking a well-known sports car as a basis of comparison, the wheelbase of the short-chassis Fraser-Nash is 8ft. 9in. Evidently little space was wasted in fitting the 2.6 litre engine into its chassis. No price is quoted by the makers, but it is understood that it will be £2,500 in Italy, or £3,300 if a model ever reaches this country.



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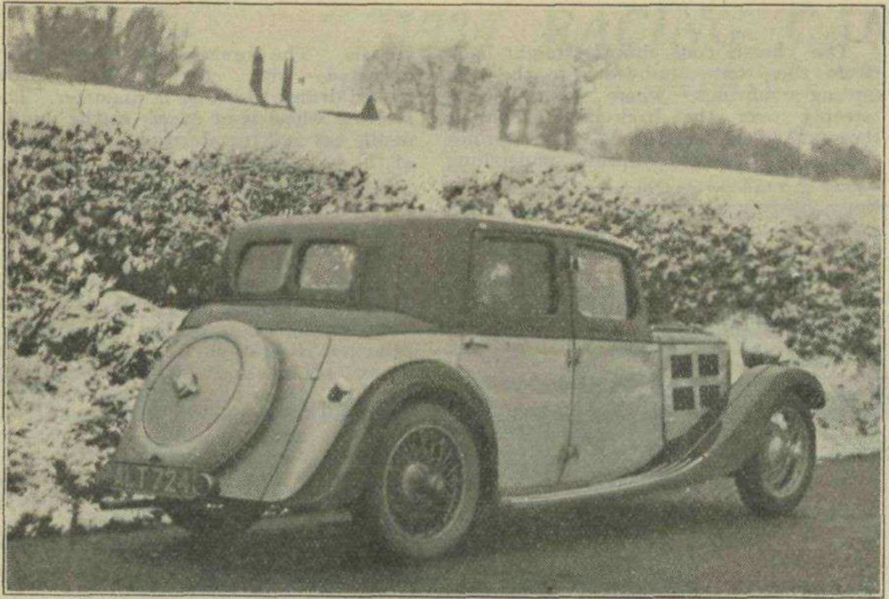


THE TRIUMPH "GLORIA"

A 10 h.p. saloon of high quality which bids fair to become one of the most popular cars of the season.

THE advent of the Triumph "Gloria" was one of the more important events of those exciting few months which preceded the Motor Show. Most cars have fairly attractive lines nowadays, but in spite of this the Triumph Company succeeded in producing a model which in both open and closed form had a distinctive appearance most pleasing to the eye. But they were not content merely with good looks, and a lively performance was assured by means of a well-timed four-cylinder engine of 1087 c.c.

Altogether the "Gloria" Triumph had just those attributes which make certain new cars an inevitable subject of conversation among motoring enthusiasts. In order to satisfy our curiosity—and that of our readers—as to the performance of the "Gloria" on the road, we asked Mr. Maurice Newnham, of Messrs. Newnhams, the London Distributors for Triumphs, for an opportunity of putting a car through its paces. His reply was to hand us the vehicle you can see in the accompanying photographs, with instructions to "do your worst, she'll only like it!"

Such a parting shot, as we let in the clutch and accelerated away from Newnham House, we took as a definite challenge and so we decided to pay Devonshire a flying week-end visit.

Let the gentle reader, then, imagine himself to be with us as we set off early on a Saturday morning. Starting on a cold day is almost instantaneous, and a Lucas Startix automatically takes up its job if one should happen to stall the engine, which by the way quickly warms up to its work. However, respect for a cold engine and the western suburbs of London caused our gait to be a slow one for several miles, but in spite of this we covered a distance of 38 miles in the first hour of our journey. Another hour passed—42 miles this time—and then we entered the long straights of Salisbury Plain, where our mileage for the third hour reached 44.

Now this performance is a fine tribute to the ability of the "Gloria" to maintain a high cruising speed, up hill and down dale, and what is more important, round curves and corners. Such average speeds would be creditable for a car of twice its size and of a correspondingly higher maximum speed. Timed over the half-mile at Brooklands the Triumph recorded exactly 60 m.p.h. so that to average anything over 40 m.p.h. demands a high standard of road-holding, especially when cornering. In this respect the Triumph was splendid, clinging to the road like a leech, without a trace of rolling. Of course the car is low built, but unlike so many of its type, there is really ample head-room and the occupants never have that boxed-in sensation that often accompanies a saloon of low, sporting lines.

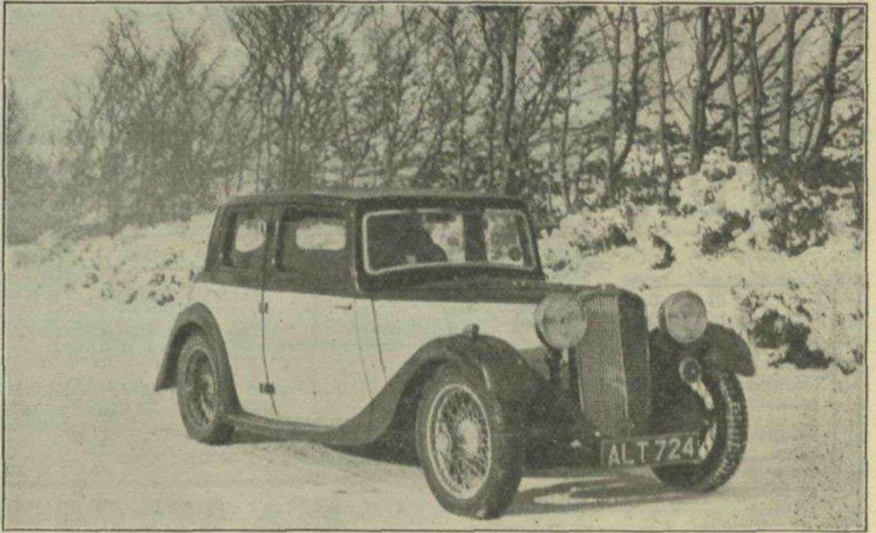
In fact the body of the "Gloria" saloon would be hard to beat. Its undoubted beauty of line, from whatever angle it is regarded, predisposes one in its favour, and this process is assisted by its good finish and attention to detail. The interior is just as good as that of many £500 cars, and is as comfortable for the driver as his passengers. The steering wheel, gear lever and pedals are all nicely placed, the windscreen gives a wide vision, and both front mud-guards can be seen without craning one's neck.

Following Mr. Newnham's advice, we did not spare the Triumph throughout our brief tour of the West, and when we returned to London we found that some 550 miles of roadway had passed beneath its flying wheels. Such a distance and such a manner of driving gives one a very fair idea of the worth of a car, and reveals points of criticism which the ordinary owner would probably take some time to discover.

Our criticisms numbered two, one of them being common to the majority of modern cars, and the other being of an easily remedied nature. The first is that the right-hand front pillar of the windscreen is too thick, and causes a blind spot

Brief Specification.

4 cyl., 62 × 90, 1,087 c.c. 9.53 h.p. Tax £10. Inlet over exhaust valves. 3 bearing crankshaft. Four speed gearbox, silent third. Free wheel. Underslung worm drive. Semi-elliptic springs. Hydraulic brakes. Wire Wheels. Tyres 4.50 × 19. Wheelbase 8'. Track 3' 9". Ground clearance 7". Price, Saloon as tested, £285.



[*Motor Sport Photographs*

A study in black and white. The Triumph "Gloria" on a snow-covered Exmoor road.

(*Continued on next page.*)

RECORDS IN A SNOWSTORM

THE business of record breaking seems largely a matter of give and take, first one and then another car raising certain records in the course of a few weeks.

Last month it will be remembered that Pierre Veyton took several records in Class F (up to 1,500 c.c.) with a super-charged 8 cylinder Bugatti. These had been held by Eyston's 6 cylinder Riley, and the latter promptly turned out to recover his lost records.

The weather was bleak at the start, and later degenerated into a snowstorm, but Eyston and McLure, the co-driver, succeeded in getting back three of the records. Here are the new figures, which have received official confirmation :

500 kilos, 112.37 m.p.h. (Bugatti 109.18 m.p.h.).

500 miles, 110.53 m.p.h. (Bugatti 107.71 m.p.h.).

3 hours, 112.42 m.p.h. (Bugatti 109.16 m.p.h.).

Zehender gets Four Records.

For many weeks, almost months, Freddie Zehender has been "on duty" at Montlhéry, covering laps at odd times of the day with a single-seater 3,000 c.c. Maserati. His intention was to attack the world's hour record, but for various reasons this was postponed.

Instead, Zehender took out the Maserati for an onslaught on records in Class D (up to 3,000 c.c.) and in the course of three-quarters of an hour succeeded in cleaning up four. These were as follows :

Freddie Zehender comes in after breaking 4 Class records at Montlhery On the right is Wimille, the well-known French driver who will be a member of the Bugatti team this year.

50 kilometres, 130.50 m.p.h. (Bugatti, 129.17 m.p.h.).

50 miles, 131.47 m.p.h. (Bugatti, 130.04 m.p.h.).

100 kilometres, 131.78 m.p.h. (Bugatti, 130.14 m.p.h.).

100 miles, 132.43 m.p.h. (Bugatti 124.15 m.p.h.).

It will be seen that these figures represent a substantial increase on Divo's records, particularly the 100 miles. They have received official I.A.R.A.C. confirmation.

Amilcar Record Activities.

The brothers de Gabardie finished off a good season's racing last month when they broke six long distance records in Class G at Montlhéry. In addition to winning the Bol d'Or, this year, they finished 12th at Le Mans, and won the 1,100 c.c. class of the Belgian 24 hour race.

The records against which their attempt was directed were those captured two months ago by Eyston, Denly, Yallop and Wisdom on the M.G. Magna. On this occasion the drivers of the Amilcar were the de Gabardie brothers and Arthur Duray. The weather was exceedingly cold when the attempt started at 8 a.m. in the morning, and baring the usual replenishment stoppages the run was accomplished with complete regularity.

The records broken were as follows :

2,000 kilometres, 85.40 m.p.h. (M.G., 80.75 m.p.h.).

3,000 kilometres, 84.90 m.p.h. (M.G., 80.57 m.p.h.).

1,000 miles, 85.31 m.p.h. (M.G., 81.25 m.p.h.).

2,000 miles, 86.25 m.p.h. (M.G., 80.49 m.p.h.).

12 hours, 85.43 m.p.h. (M.G., 80.23 m.p.h.).

24 hours, 85.05 m.p.h. (M.G., 80.56 m.p.h.).

A GRUELLING TOURING TEST.

AN extraordinarily severe touring test has just been completed in America. It took place in Death Valley, the hottest and lowest spot in America and the object of the test was to try out the efficiency of Mobiloil as a lubricant.

A Plymouth sedan was selected for the test. It was stripped of its radiator, and without a drop of water in its cooling system, it was driven for ten hours on the sun-scorched floor of Death Valley. Ten hours in the scorching heat with the thermometer at 130°F. was too much for one driver. Drivers were therefore changed periodically. This was done without stopping the car or engine, so that there was no abatement in the punishment to which the car and lubricant were subjected.

Temperatures were enormously high. The carburetter temperature was 176°, the crankcase oil 200°, the cylinder wall 405°, the cylinder head 490°. These are all much higher than any car would normally encounter in actual service. Mobiloil functioned perfectly throughout ; there was no loss of power, no bearing failure ; and at the end no scored cylinders.

Following the endurance test the car, with full equipment, was made to do a 1,000-mile drive in second gear at 30 m.p.h. Then it was driven on a wild jaunt from Death Valley as far as motor cars can go up the side of Mount Whitney, the highest mountain in the United States. At the end of its journey it was examined and found to be in perfect running order.

THE TRIUMPH "GLORIA" (*Continued from page 122*).

which has to be dodged on a winding road. The second is that the steering, while being light and accurate at low speeds, could be rather more positive at the car's maximum—especially over indifferent road surfaces. The self-centering action is not particularly powerful, and an increased caster would probably do the trick. On the other hand this slight "wander" may be due to insufficient bracing of the front of the chassis, but in any case it does not become evident until a speed of 60 m.p.h. or over has been reached.

When we bear in mind the noble way in which the Triumph stood up to its work we feel almost ashamed of finding even these two small faults with it, and our abiding remembrance is of an extraordinarily willing car, with a small tax, which bears the most attractive coachwork we have seen in many a long day.

At £285 it should provide pleasant motoring for many who requeri their cars to be something more than a mere form of transport.

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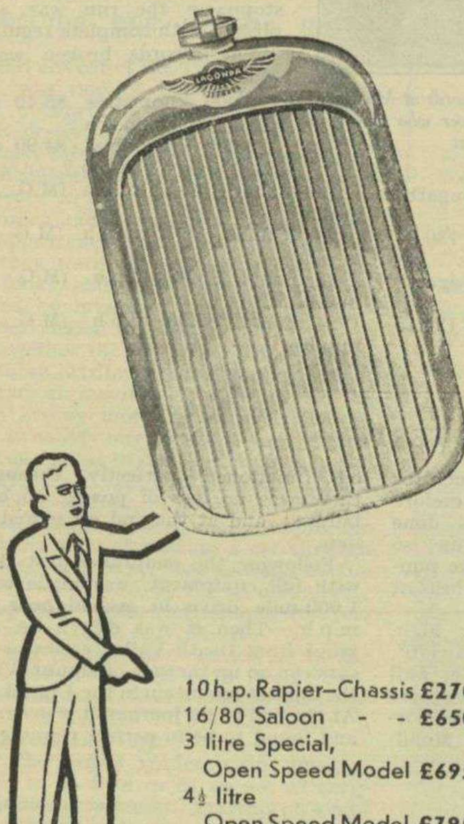

The outstanding feature of the 4½ litre Lagonda is the way it combines thrilling — almost racer — performance with the most remarkable docility.

Although it can hold its own with most fast cars, yet it is a slow "revver," and never seems to be throwing itself into the collar.

It has shaken well-known racing men and prominent motor journalists out of their complacency, and definitely has a performance unequalled by any other car, even at twice the price.

It is something new and entirely different in high speed motoring and we would welcome an opportunity of demonstrating its abilities to you any time at your convenience.

10 h.p. Rapier—Chassis	£270
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4½ litre Open Speed Model	£795
Sports Saloon - -	£895

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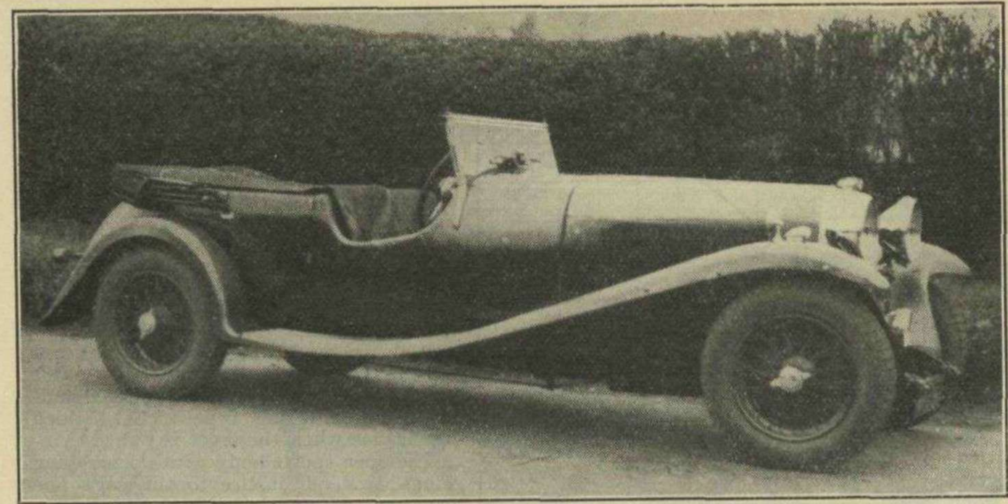


THE 4½ LITRE LAGONDA

A THOROUGHBRED CAR WITH AN OUTSTANDING PERFORMANCE

LAGONDA cars have always upheld a reputation for effortless fast touring and the pride of ownership which fine detail work and distinguished coachbuilding can give. The 4½ litre model retains these characteristics, but scores considerably over its forebears by its high power-weight ratio. The chassis is no bigger than that of the three litre car, and there is no suggestion of clumsiness, heavy steering or the other drawbacks which often accompany the large engined car. Such were our reflections as we drove along the narrow ways from Staines to Brooklands.

Arriving there it was found that winter repairs were in full swing, and that the stretch from the Fork round the Member's Banking was " Verboten," and the Finishing Straight was also receiving attention. This meant that it was only possible to get on the Home Banking at about 45 m.p.h., but we were gratified to find that 80 m.p.h. was reached half way along the Railway Straight and 90 by the end. The timed speed of 91 m.p.h over a half-mile did not therefore represent the car's maximum speed, as it was doing 96 at the end of this distance, and one would estimate the correct figure as about 95 m.p.h., making the new Lagonda the fastest unsupercharged car we have tested. At 80 m.p.h. on the track it can be directed with two fingers, and it was perfectly steady at its maximum speed.

The acceleration figures are noticeably good, and bear comparison with cars of transatlantic design which at present set the standard. This in spite of the high third and top gears, which should ensure economy of running and long life.

The application of the brakes, which is assisted by a Dewandre vacuum servo, is smooth and progressive, but they are inclined to squeal when applied really hard. On a damp track the rear wheels tended to lock, though this had no effect on the steering, and a stopping distance of 58 feet from 40 m.p.h. was gratifying. On the road the brakes proved themselves thoroughly capable of dealing with the high speeds attained.

The suspension on the track and for general touring was exemplary, but was a little lively on fast bends. This was easily corrected by tightening the shock absorbers by means of the telecontrols, which are placed within easy reach. The steering was light without being low-geared, and had a good caster action.

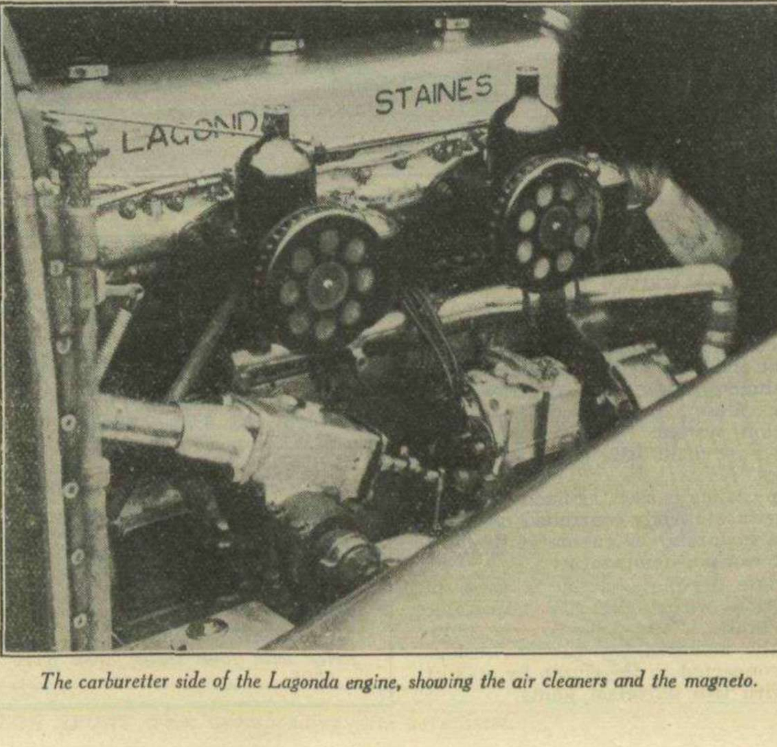
To enjoy driving a fast car one needs an erect driving position, while all the controls should come to hand without stretching. Both these points have been watched on the 4½ Lagonda, and the only criticisms one can make are that the windscreen is too low for a tall driver, while the angle of the accelerator makes it difficult to depress fully. The first matter will receive attention on later models, while the average owner will not need to keep the accelerator fully depressed for long periods. A good feature of the driving position is that both front wings can be seen.

The front seats were unusually comfortable, for pneumatic upholstery is used for the squabs as well as the cushions. The rear seats were good too, with a folding centre arm rest and plenty of leg room.

The high top gear, quiet running and the good road-holding of the Lagonda inspire confidence from the first, and high speed is effortless. Cruising down the Basingstoke road, the speedometer needle mounted to 70, 80 and even to 95 on reaching Hartford Bridge Flats, although there was a fair amount of traffic about. The highest speed reached was 96 m.p.h., at which the speedometer showed 100 m.p.h., and at this speed the car held a perfectly steady course.

The gear-box is an important item on a sports car. Third gear is obtained by completely silent constant-mesh pinions, and the change from top gear is quick and light. A comfortable 80 m.p.h. can be obtained at 4,000 r.p.m., so its use in putting up a high average speed can be imagined. There is a larger interval between third and second, on which the maximum is about 45 m.p.h., but this can be speeded up when required by using the clutch stop. The engine ran smoothly up to 4,000 r.p.m. without flat spot or period.

It is difficult to assign any best cruising speed, as the car was equally happy throughout the range. On good roads, reasonably free from traffic, 75 m.p.h., which is only 3,000 r.p.m., did not seem excessive, and in the event of a check a touch of third gear soon restored the lost speed. An average speed of 50 m.p.h.,



The carburetter side of the Lagonda engine, showing the air cleaners and the magneto.

THE 4½ LITRE LAGONDA—continued

which requires hard driving on a less lively car, is a matter of course on the Lagonda. Cruising along at 40 m.p.h., which is a mere 1,600 r.p.m., is no less delightful, while the big engine pulls steadily down to seven or eight m.p.h. if required to do so. The car is economical too, and the petrol consumption worked out at 15½ m.p.h., which is especially creditable considering that Brooklands tests, London traffic and really hard driving on the roads made up most of the distance.

Powerful Lucas P.100 headlamps are standard, with a central light which comes on when the others are extinguished. The dipping is controlled by a foot-operated switch.

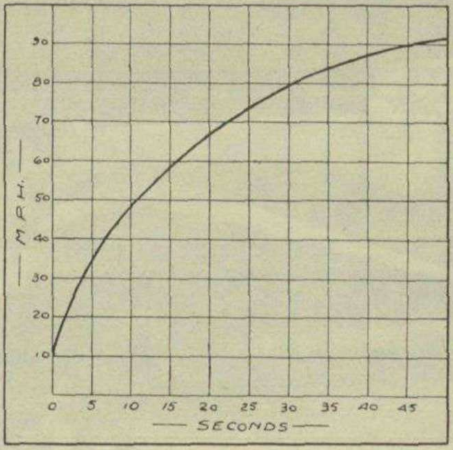
The hood and side-curtains are particularly efficient, and when they are erected, the tourer is virtually a closed car. Each panel of the side curtains is marked with its position, and the front ones hook on to the screen, which avoids the usual searching draughts.

Turning to technical details, the power-unit of the new Lagonda is a 4½ litre Meadows engine, mounted at four points on rubber, which gives 108 horsepower at 3,100 r.p.m. It has push-rod operated overhead valves and a four-bearing crank-shaft with a vibration damper at the front end. Two S.U. carburetters are used, supplied by a duplex electric pump from a 20 gallon rear tank which has a reserve of two gallons. A Ki-Gass petrol primer makes starting easy on cold mornings. The carburetters are fitted with Vokes air cleaners, and there is no air hiss to mar the quiet running of the engine.

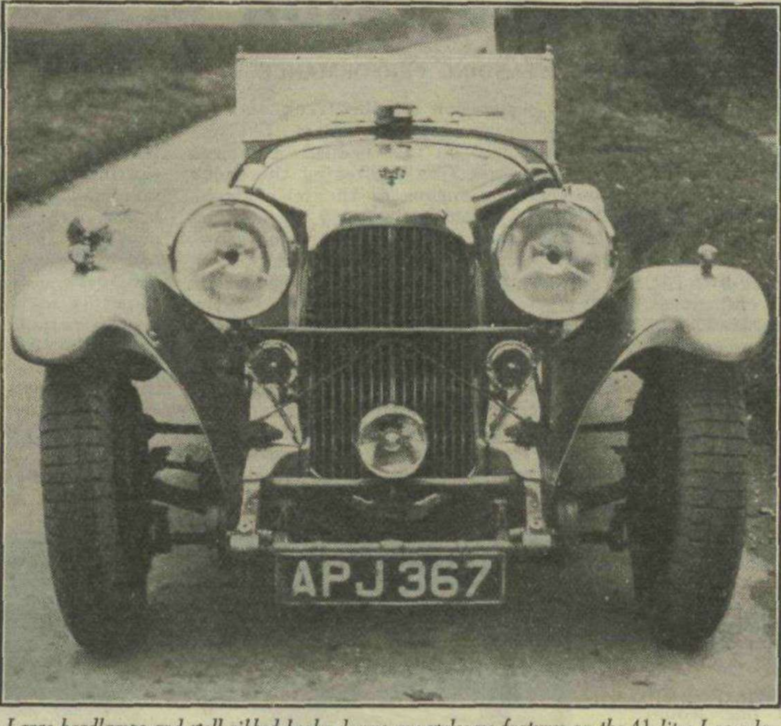
Two plugs per cylinder are used, those on the near side receiving their current from a coil. The distributor is mounted vertically on the end of the dynamo. The magneto is carried on the off-side, and coil or magneto can be cut out by the dashboard switch so that the other can be tested. There is a large oil-filler at the front end of the engine and the sump holds three gallons, while suction and pressure filters are embodied in the lubrication system. The camshaft and auxilaries are chain-driven, with accessible adjusters.

Pump cooling is used, assisted by a fan, and thermostatically-controlled radiator shutters maintain the engine at its most efficient working temperature.

A single dry-plate clutch is used, in conjunction with a readily adjustable clutch brake. The gear-box is independently mounted on rubber bushes, and is connected to the clutch by a short shaft with two universal joints.



The acceleration chart of the 4½-litre Lagonda.



Large headlamps and well-ribbed brake drums are welcome features on the 4½-litre Lagonda.

Brief Specification.

Engine : Six cylinder. Bore 88.5 *mm. Stroke* 120 *mm. Capacity* 4,429 *c.c. Tax* £30. *Push-rod overhead valves. Two S.U. carburetters. Coil and Magneto ignition.*

Gearbox : 4 speeds and reverse. Ratios 3.6, 4.75, 7.35 *and* 11.49 *to* 1. *Constant mesh third gear. Right hand change.*

Rear axle: Spiral bevel. Semi-floating.

Suspension : Half Elliptic.

Brakes : Rod operated, Vacuum-Servo assisted.

Dimensions : Wheelbase 10*ft.* 9*in. Track* 4*ft.* 9¾ *in.*

Weight : Chassis 27 *cwt. With four seater body* 32½ *cwt.*

Price with four seater open body : £795.

The four-speed gear-box has a silent third gear, and a right hand change. An open propellor shaft and a spiral bevel back axle complete the transmission lay-out.

The chassis is slightly upswept in front and more so at the rear. Underslung half-elliptic springs are used throughout, with rubber check pads. Two sets of friction shock absorbers are used on each axle, one being the normal triple type, while the others are hydro-telecontrol.

Rods are used to operate the front and rear brakes and a vacuum servo-motor increases the braking effort. The hand-lever has a racing type rachet, which disengages when the lever is pulled.

The open sports body with its sweeping wings does full justice to the car's fine performance, and is built at the Staines works. It has three doors with a good cut-away on the driver's side. The handsome radiator with its plated shutters has a lever-action cap, likewise the petrol tank. The windscreen opens forward. The hood stows neatly with screw-down fasteners, and the side-curtains are stowed behind the rear squab. The rear panel hinges down, revealing a locker large enough to take two or three suit-cases. The reversing light is a useful feature.

There is a fine array of instruments on the facia board, and they are laid out so as to be seen easily. We liked the pull-out dash lamps, and also those mounted under the bonnet to light up the engine. Other pleasant features were the Ashby steering wheel, the smoked glass mirror mounted on the front wing and the spare wheel cover.

Apart from the pleasure of owning a car of distinction, there is a very real satisfaction in driving a powerful yet docile "sportwagen." In ordinary use such a car is only giving half its rated horsepower, and is saved from the stresses which shorten the life of engine, transmission and coachwork of large cars fitted with small capacity power-units. A point of some interest to the busy owner is that a slight reduction in the power-output inevitable as the date of the last decarbonising grows more distant, will not materially affect the car's performance.

In performance, appearance and equipment the new 4½ litre Lagonda fulfills all the requirements of a sporting car. It is priced very reasonably at £795 and carries a nine year guarantee. The makers' address is Lagonda Ltd., Staines, Middlesex.

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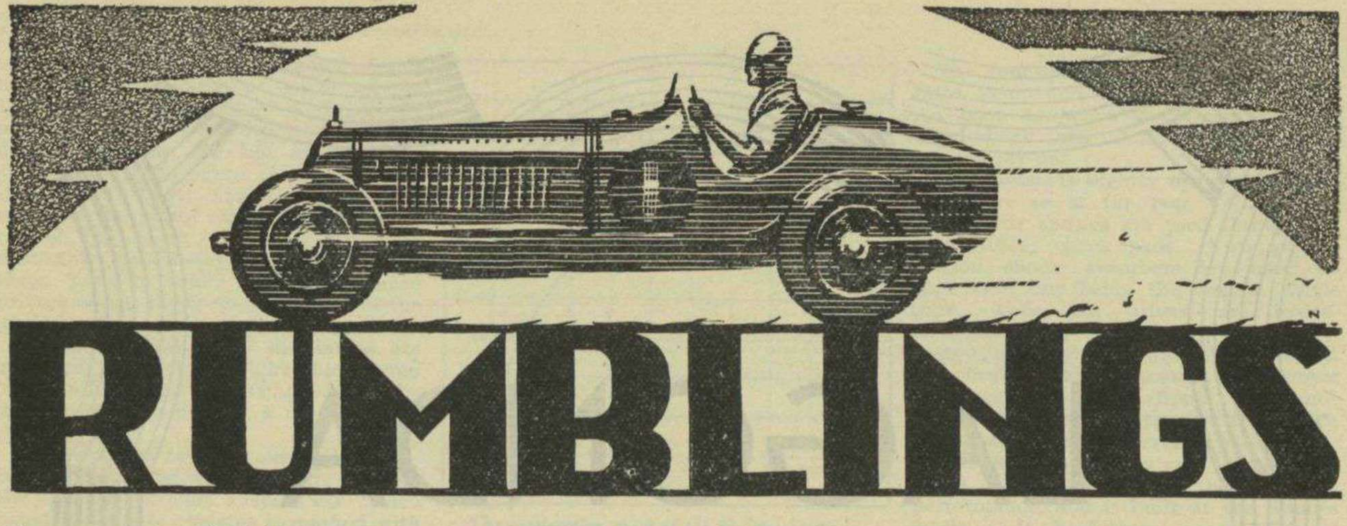


RUMBLINGS

Future of the T.T. Races.

THE Royal Automobile Club are at present deliberating the future of the Ulster race, and have asked the opinions of manufacturers, past competitors and other interested parties as to the form that the 1934 event should take. This scheme cannot fail to do good, and I hope that the suggestions received will give material for a more widely supported event.

A change which has frequently been discussed is the barring of supercharged cars. With the notable exception of the M.G. Car Company none of the English firms who support the T.T. race have successfully utilised the supercharger, while a number of manufacturers such as Singer, Alvis, Talbot and Lagonda might well be induced to take part once more if compressers were barred.

I understand that the rules governing the type of cars which may compete in 1934 will be tightened up. A definite number of cars will have to have been made before they will be eligible to compete in the race, and catalogue alternatives, such as the number of carburetters, the ignition system, body construction and the like will not be allowed. These alterations would still further encourage the non-racing sports car firms to enter their cars without feeling that they have no chance against virtual racing cars fitted with regulation bodies.

A return to complete equipment of hood, mudguards and windscreens would probably be a false step, as the cars would be considerably slowed. The regulation mudguards are not much use for touring purposes, and they also make it difficult to detect a tyre which is showing the white strip.

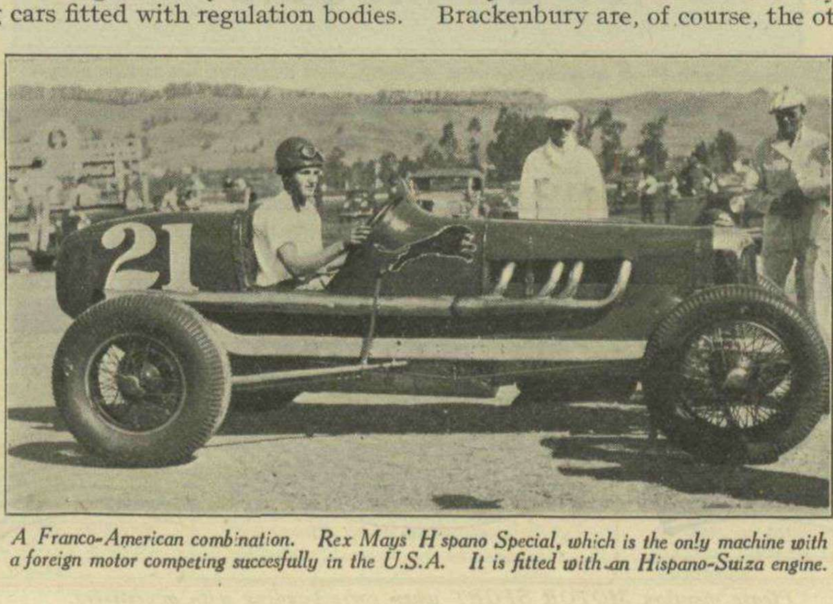
It is unlikely that the length of the race will be increased, since the roads of the Ards peninsula normally carry a large volume of traffic and any further closing of the circuit would be inconvenient. Lord Howe had suggested that a sports car race under the present rules should be held in the morning and a scratch Grand Prix should be held in the afternoon, but here the organisers will be up against the question of support in view of the conflicting nature of the two events, and the difficulty of finding prize money.

The handicap system has come in for a good deal of abuse, but in view of the number of different sizes of sports cars produced in Great Britain, there seems to be no alternative method of securing a good race. If supercharged cars are dropped, the difference in maximum speed between the large cars and the small will be much less, and the efficiency of the present-day small car will be demonstrated without the necessity of the present heavy handicapping.

Whitney Straight's Team.

Whitney Straight is going on steadily with his preparations for next season. In the event of Hamilton not being fully recovered in time to take his place in the team, Straight tells me that Antonio Brivio will probably be the fourth driver. Cyril Paul and Charles Brackenbury are, of course, the other two.

Speaking generally, the four Maseratis will operate in pairs at different races, and whenever the Calendar is particularly full they may even become single units in various events. Two high-speed trucks equipped as travelling garages are being planned, this being considered the most convenient form of transport from end to end of Europe for cars and personnel.



A Franco-American combination. Rex Mays' Hispano Special, which is the only machine with a foreign motor competing succesfully in the U.S.A. It is fitted with an Hispano-Suiza engine.

RUMBLINGS—continued.

Films.

The B.R.D.C. Film show was not, in my opinion, quite up to standard from the entertainment point of view. "Motor Mania" was the best item on the programme, while the display of 16 m.m. films taken by various people were interesting, but suffered from a lack of "cutting." Not the least enjoyable part of these Film Shows, of course, is that they provide an ideal opportunity of meeting friends whom one usually sees only at Brooklands and elsewhere during the season.

Can the Shelsley Record Go Lower ?

At Bush House I had an illuminating chat with a man who has been one of the most consistent performers at Shelsley in recent years. Our subject was the possibility of Straight's record for the hill of 41.2 secs. being lowered. I ventured the opinion that a limit has probably been reached of acceleration, braking and cornering at Shelsley, but my companion assured me that there is plenty of room for improvement yet.

Admitting the fact that records are inevitably beaten, I asked him what time he thought the present condition of the hill would allow. His reply was rather startling: "I see no reason why Shelsley should not be climbed in about 38 seconds, and I myself am making some careful experiments this winter in the matter of wheelgrip and braking."

Puzzle—Find a Racing Car.

The decision of the Alfa-Romeo factory not to supply foreigners with cars, not even the Grand Prix type, has thrown the racing world into some confusion. It is not really very surprising, as non-Italian racing firms had been in the habit of buying these cars and looking inside them to see if there was anything worth copying, and in the Monopostos at least there certainly would be. I gather that for 1934 the cars from the "Casa Milinese" will only be hired out for the week, so to speak, probably with large lead seals on the engines and other vital parts !

In England Lord Howe is one of the drivers affected by the change of front, all the more annoying because he had ordered the new car in October, as soon as the "Type B" was announced. Noel Rees had sold the two-seater which Brian Lewis drove so successfully during the past season in anticipation of getting a single-seater, but after much frantic telephoning and writing abroad, has succeeded in obtaining the Maserati which Birkin drove in the Tripoli G.P. last year. He is going to Sestrières, the new Italian winter sports centre, in company with Lewis, to recover from the struggle. Tim Rose-Richards, the third English driver, usually associated with Alfa-Romeos, had hoped to do some racing on the single-seater ordered by Abecassis. Fortunately he has still retained his 2.3 Bugatti.

English Plans for Abroad.

The success of the M.G. Magnettes in last year's Mille Miglia was very encouraging, particularly as it was the first race in which they had been entered, and Lord Howe will be taking out a team in 1934. Lord Howe, Eyston and Lurani will be driving, but it is not certain whether Hamilton will be fit enough to take a wheel.

H. J. Aldington is entering a Frazer Nash in the 1,500 c.c. Sports Class. The car will be running on Esso, which is more or less the equivalent of Pratt's Ethyl, and is easily obtained, so that he will not trouble about depots along the course. The Frazer Nashes showed up particularly well in the Alpine Trial, and they should be quite at home threading the tortuous Raticosa and Futa passes. Jucker, who has driven at Donington, may also compete on a Frazer Nash.

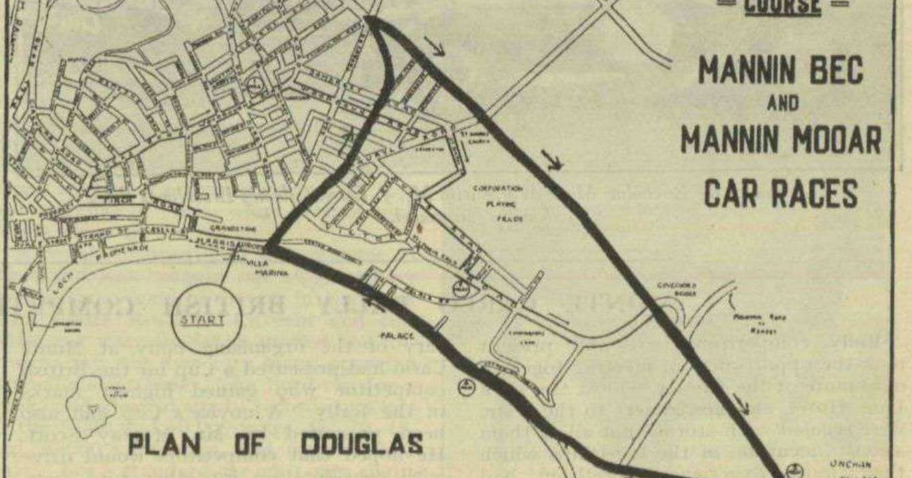
Le Mans.

Pressure of work at the Aston Martin factory has made it impossible to prepare a car for the Mille Miglia, but a team of three cars have been entered for Le Mans. The drivers have not yet been settled, but E. R. Hall and Mrs. Hall, Penn Hughes and Lurani will probably be the drivers. There is also a possibility of two private entries, one being Tongue, who drove an A.M. in the Alpine Trial, and Faulkner.

Singers have entered a team to be driven by Barnes, Langley and Norman Black, while there are rumours of one or more teams of Rileys.

Mannin Course Revised.

From the spectacular point of view, the loss of the Alfa Romeos and Bugattis would be felt at Ulster, but as Captain Phillips says, the Mannin Races in the Isle of Man are there to give them full scope. A deputation from the Isle of Man met the R.A.C. during December,

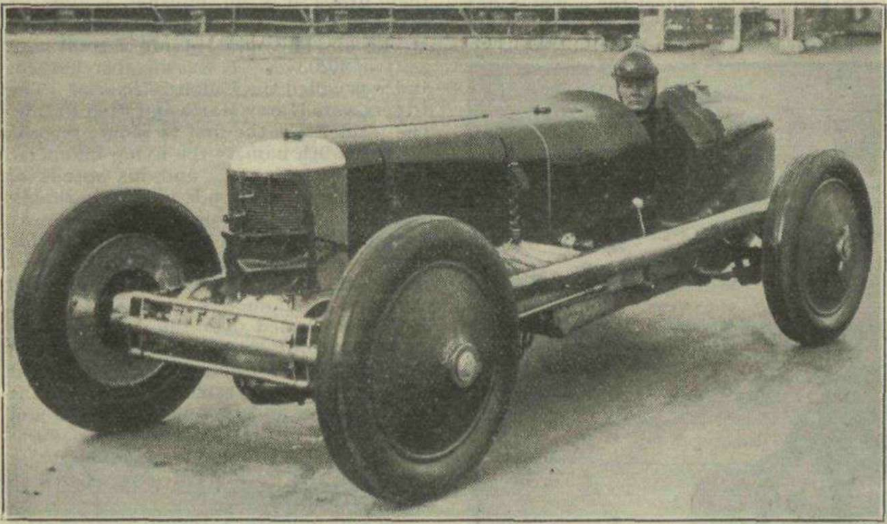


The New Course, with the old course faintly outlined.

THE RECORD SEASON REVIEWED—continued.

watch, the winding operation being substituted by stops for replenishments and a change of driver. Days grew into weeks, and weeks into months, and still "La Petite Rosalie" steadily circled the track, its speed never varying far from the 58 m.p.h. mark. When one remembers that the car was of standard design, and merely carefully assembled and run in, its consistent high speed running is little short of miraculous.

Some sort of limit had to be placed on its tireless performance, and so it was decided to withdraw the gallant little car after it had run for 300,000 kilometres or 187,500 miles at an average speed of 58.08 m.p.h. Altogether the Citroen set up 106 World's Records and 181 International Class F records, and throughout the entire run of 133 days, or four and a half months, the speed only varied from 57.65 m.p.h. to 58.96 m.p.h.

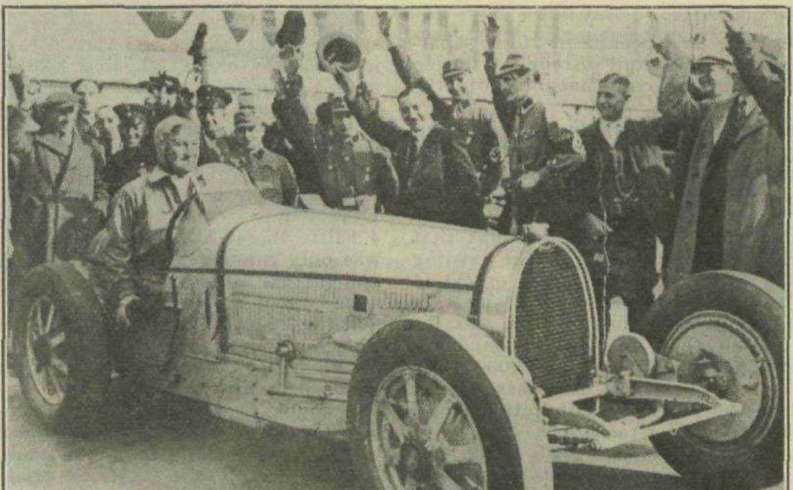


In addition to many records in class E, Mrs. Stewart is the holder of the Montlhéry lap record.

"La Petite Rosalie" was sponsored by the Yacco Oil Company, and a rival Citroen entered the lists on March 21st when a 6 cylinder model of 2,722 c.c. capacity set off on a long distance run. The drivers of this car were Y. Boillot, A. Duray, Guyot, Habourdin, Wagner and Bonnes. In the 8 days in which the car kept going without a serious stop, 16 records in Class D were taken, at speeds from 72.44 m.p.h. to 74.73 m.p.h., the previous holders being Citroen and Invicta.

Mrs. Gwenda Stewart occupies a unique position in the motor-racing world, for she confines her activities almost exclusively to record-breaking. At the end of 1932 she was the holder of nine records in Class F (up to 2,000 c.c.), but her Derby-Miller, with most of the spares, had been completely destroyed in the great fire at Montlhéry. A new car, however, was constructed at the Derby works at Courbevoie, under the supervision of W. D. Hawkes, and this Derby Special was considered to be in a sufficiently prepared state to make an official record attempt on April 5th. The flying mile was its objective, the existing record of 136.26 m.p.h. standing to the credit of E. A. D. Eldridge driving a Miller. Everything went according to plan, and the months of careful work which had preceded the run were fully justified when the timekeepers informed Mrs. Stewart that the record had been comfortably beaten with a speed of 137.85 m.p.h.

On April 22nd two cars were seen in action at Montlhéry. The first did not occupy the track for long, because "Trébuh" was only aiming at the standing kilometre record. M. Cohas, to give him his real name, was driving a Bugatti of 2,261 c.c. and the Class D record he was attacking was held by the Englishman, W. Y. Craig, also on a Bugatti, at 80.32 m.p.h. "Trébuh" just did it, and took the record with a speed of 80.83 m.p.h.



The late Count Czaikowski made one of the finest performances of the year when he broke the World's hour record at Avus.

The second car occupied the track for just over an hour. It was an old 6 cylinder Amilcar, once raced at Brooklands by Miss Maconachie, and now owned by the Swedish driver, Henken Widengren. Much work had been carried out on the car by R. F. Oats, including the fitting of a single seater streamlined body. The Amilcar was watched with sympathetic interest by the Frenchmen at the track, for the Amilcar factory is near Paris. Lapping at over 115 m.p.h. Widengren held to his schedule quite comfortably, and in 64½ minutes had annexed 6 records in Class 6 (up to 1,100 c.c.). His speed ranged from 113.07 m.p.h. for the 50 kilometres to 115.56 m.p.h. for the 200 kilometres. The hour record fell at 115.56 m.p.h. The previous figures were from 109 m.p.h. to 110 m.p.h. and had been made by F. W. Dixon (Riley).

Four days later, on April 26th, another Citroen joined "La Petite Rosalie" at Montlhéry. This was a 6 cylinder car of 2,650 c.c. capacity, and the intention was to capture long-distance records in Class D. This car was also sponsored by the Yacco concern, and the same drivers and organisation were used. Straightaway the records began to fall, the first being those which had been taken by the 2,772 c.c. Citroen in the previous month. With the superhuman regularity which distinguishes all records made by that past-master at the game, César Marchand, the speed of the car was almost constant. Actually, 52 records were taken in 28 days running, and the speed raised from 74.04 m.p.h. to 80.56 m.p.h.

By this time some minor improvements had been made to the tuning of the Derby Special, and Mrs. Stewart put these to test on May 2nd in another attempt to raise the flying mile record still higher, in Class E. Her speed this time was 139.13 m.p.h.—nearly 2 m.p.h. faster—and the car was thereupon put back in its garage for further work to be done on its power unit.

On May 5th an unusual record attempt took place, for the late Count Czaikowski took his 4.9 litre Bugatti to the Avus track

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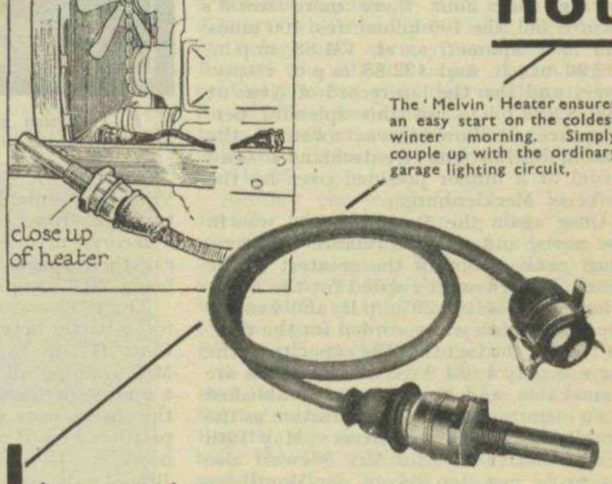

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THE RECORD SEASON REVIEWED—continued.

near Berlin, for an attack on world's records. Now the Avus track is not an ideal place for breaking records, owing to the fact that the curves at each end necessitate a reduction in speed to about 80 m.p.h. The straights, on the other hand, are very long, and enable a speed of 160 m.p.h. to be attained. Czaikowski set himself to maintain a lap speed of 133 m.p.h. and was assisted by his wife who signalled his progress on each circuit. After a magnificent run the Bugatti covered 132 miles, 1,537 yards in one hour at an average speed of 132.87 m.p.h., beating the previous figure of Eyston's Panhard et Levassor by exactly 2 m.p.h. During that hour there more world's records fell, the 100 kilometres, 100 miles, and 200 kilometres, at 131.88 m.p.h., 132.90 m.p.h. and 132.85 m.p.h. respectively and also the lap record of Avus at 135.752 m.p.h. For this splendid performance Czaikowski was awarded the Automobilclub von Deutschland's Gold Medal at a dinner presided over by the Duke of Mecklenburg.

Once again the Derby Special was in the news, and its performance this time must rank as one of the greatest of the year. Mrs. Stewart's speed for the flying kilometre was 143.29 m.p.h. and exactly the same figure was recorded for the mile. In view of the fact that the capacity of the car was only 1,681.9 c.c. these records are remarkable, and Mrs. Stewart established in no uncertain manner her position as the world's fastest woman-driver. May 19th is a red-letter day, for Mrs. Stewart also set up a new lap record for Montlhéry Track at the amazing speed of 145.94 m.p.h.

June was a fairly quiet month, for records were confined to an attempt by the 2,721 c.c. Citroen driven by Y. Boillot and his confréres. This car had made some records earlier in the year, but they had all been quickly beaten by the Marchand Citroen. Now the battle was carried a stage further, and after running for one week Boillot succeeded in recapturing 15 records, his speed being from 80.72 m.p.h. to 81.97 m.p.h.

In July, too, there was only one record attempt, and this was made by two German drivers at Montlhéry. Their car was a German Standard, a little two-cylinder machine of 495 c.c. capacity. Von Fuchsenfeld and Meyer took it in turns to drive, and in 6 hours cleared up 5 records in Class I. For such a small car their speeds were good, the highest being 80.27 m.p.h. for 50 miles.

G. E. T. Eyston was constantly in action at Montlhery during 1934 *on various makes of cars.*

The 1932 season, of course, was notable for a battle between Austin and M.G. in Class H (up to 750 c.c.). It ended in M.G. gaining all the records in the class, a unique performance, and in many cases the speeds were so high that further competition seemed unlikely. Early in August however, L. P. Driscoll went down to Brooklands with one of the little pale green Austin single-seaters, and calmly broke the Class H record for 50 kilometres at a speed of 100.24 m.p.h. He was not satisfied with this, and a week later improved the figure to 101.52 m.p.h. and took the 50 miles and 100 kilometres into the bargain.

Meanwhile in Hungary was taking place the annual records week over the wonderful stretch of road at Tat. Only L. Hartmann was actually successful in breaking International Class Records, and his were the standing kilometre and mile in Class D. Driving his 2.3 litre Bugatti he covered the first at a speed of 81.49 m.p.h. and the second at 91.65 m.p.h. The kilometre had been beaten once already this year, it will be remembered, by the Frenchman "Trébuh" at Montlhéry. The previous mile record was held by Hartmann himself at 90.72 m.p.h.

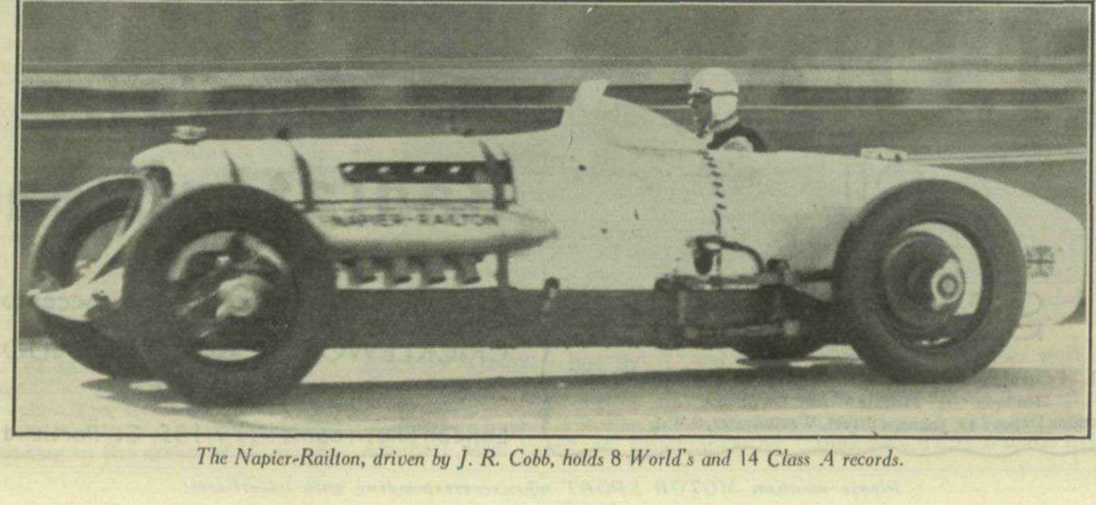
Back at Montlhéry that famous record-breaking partnership, George Eyston and A. Denly appeared with the 8 cyl. 4 litre Delage with streamlined body which already had a number of records to its credit. It was intended to make a prolonged attack, but the car had to be withdrawn after an hour and three quarters, having broken the 200 miles Class C record at 117.59 m.p.h.

On September 1st Mrs. Stewart gave the Derby Special a chance to break the 10 mile record, which it took quite comfortably at 138.34 m.p.h., beating her own previous record by 4 m.p.h.

By this time the M.G. Company had completed their arrangements for an attempt to recapture the records lost to the Austin in August. The "Magic Midget" had been prepared for the 500 Miles Race at Brooklands, and the record run was combined with a dress rehearsal, so to speak, for the race itself. 35 minutes running was sufficient to do the trick, and the three records were again held by M.G. at 105 to 106 m.p.h.

Brooklands was again the scene of a record attempt when H. T. H. Clayton turned up there on September 27th and proceeded to break the standing mile record in Class G. His Amilcar was the one originally raced by Major A. T. G. Gardner, and a well known Brooklands car. Clayton's speed was 74.57 m.p.h., a distinct improvement on the 71.12 m.p.h. attained by "Archie" Nash many years ago on an old Frazer Nash.

For some months past there had been great activity on the part of a group of Englishmen who planned to make a wholesale attempt on long distance world's records up to 24 hours at Montlhéry. The car to be used was the Napier-Railton owned by John Cobb, and the relief drivers were to be "Tim" Rose-Richards, the Hon. Brian Lewis, and Cyril Paul. By the end of September everything was complete, and the whole team moved over to Montlhéry. After one or two days' practice the car got going on the morning of October 2nd. Unfortunately the heavy car soon found a weak spot in the surface of Montlhéry Track, and the constant pounding at 130 m.p.h. was too much for



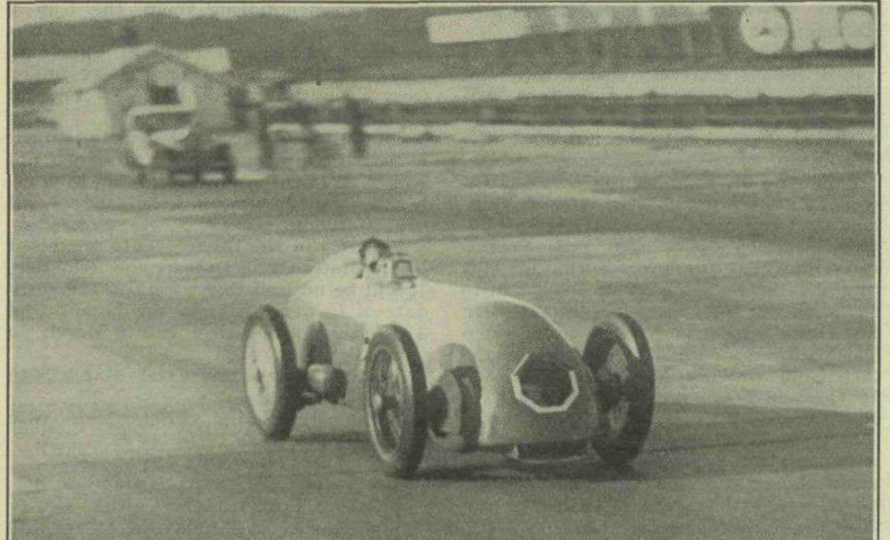
The Napier-Railton, driven by J. R. Cobb, holds 8 *World's and* 14 *Class A records.*

THE RECORD SEASON REVIEWED—continued.

the tyres, causing them to burst. This would not have mattered so much, for the car was fast enough to maintain its schedule, but in the interests of safety it was decided not to continue the run during the night. Some consolation was given by the fact that 6 World's and 6 International Class A records had already been taken when the car was flagged in.

M.G. provided the next record run, and as the 24 hour mark was being attempted, Montlhéry had perforce to be used—apart from such considerations as its immeasureably smoother surface. The car was one of the "L" type Magnas which had already made a fine performance in long distance races at Brooklands. Eyston, Denly, Yallop and Wisdom took it in turns to drive, and their objective was reached in true M.G. fashion. Altogether 6 Class C records were annexed, the 24 hour figure being 80.56 m.p.h.

Montlhéry was by now beginning to wear a busy appearance, and Eyston and Denly had scarcely finished with the M.G. Magna than they were in action once more, this time at the wheel of a 4 cylinder 2 litre Hotchkiss in company with Vasselle. This new model had made a promising début in the Alpine Trial, and now it proved its capacity for sheer speed by taking three records in Class E at a speed of 101 m.p.h. The Hotchkiss was fitted with a streamlined saloon body.



128.62 *m.p.h. from a 750 c.c. car! Here is the marvellous M.G. Midget, with Denly at the wheel, in full flight at Montlhéry.*

Three days later came a surprise for everyone in the motoring world. Considering that the basic design of the Austin Seven was conceived 10 years ago, it was generally thought that the fastest speeds so far attained by a Seven—about 105 m.p.h.—represented its absolute maximum possible in the light of modern tuning knowledge. Then, to everyone's amazement, came the news that T. Murray Jamieson had broken three Class H records at Montlhéry with a speed of 119 m.p.h.! Here was a new lease of life, indeed, and the 750 c.c. battle seemed likely to be one of extreme interest.

The M.G. reply was soon forthcoming, and at any rate up to the time of writing, is the last stroke in the quest of speed with 750 c.c. cars. The "Magic Midget" was fitted with a narrower and more efficiently streamlined body, into which, alas! George Eyston was unable to insert himself. Accordingly he handed over to Denly, his able partner in so many record runs and races. The little M.G. was almost incredibly fast, and swept round the steep banking of Montlhéry at nearly 130 m.p.h. In actual fact, the flying mile and kilometre were taken at 128.62 m.p.h. and these were followed by the 5 and 10 kilometres and miles, the slowest being at 125.56 m.p.h. In company with Sir Malcolm Campbell's 272 m.p.h. these M.G. Midget figures by Denly were undoubtedly the outstanding speed records of 1933.

In point of time the next record to be broken was a most important one, namely the World's standing kilometre. After having appeared almost exclusively at the wheel of Alfa Romeos in various races during the past few years, that sporting young Swiss driver, H. Ruesch, turned up at Montlhéry with a 3 litre Maserati. With this car he broke the late J. G. P. Thomas's record made with "Babs" at 86.90 m.p.h. with the wonderful speed of 88.33 m.p.h. This figure also counted, of course, as a Class D record, and beat Hartmann's speed recorded at Tat in August by some 7 m.p.h.

For some reason or other very little publicity was given to Ruesch's record, and not even the officials in this country knew anything about it. Consequently when John Cobb took out the Napier Railton at Brooklands five days later, he thought he only had Thomas's record to beat. This he did quite comfortably with a speed of 88.14 m.p.h. On the same day he set up a new Class A record for the standing kilometre at 84.12 m.p.h. (the previous best being 83.67 m.p.h. by K. Lee Guinness on the 12 cylinder Sunbeam) and broke the world's standing mile record previously held by Kaye Don (Sunbeam) at 100.77 m.p.h. with a speed of 102.5 m.p.h.

As soon as he was informed that the Maserati had already beaten the world's standing kilometre record, Cobb immediately made arrangements to have another attempt at Brooklands. This took place on November 4th, and after some hectic work in driving the car the reverse way of the Track, Cobb had the satisfaction of raising the record to a speed of 88.52 m.p.h.

While this was going on at Brooklands some more record activity had been seen at Montlhéry. On October 28th Pierre Veyron, the well known French road racing driver, took out a 1,500 c.c. 8 cylinder supercharged Bugatti, and broke 5 records in class F (500 kilometres to 6 hours) which had previously been held by Delage and Alvis. The speed of the Bugatti was 107-109 m.p.h., but Veyron evidently had a good deal up his sleeve, for on November 4th he set up a new 200 miles record at a speed of 116.49 m.p.h. as against Eyston's 6 cylinder Riley figure of 111.65 m.p.h.

Another car which was seen on the French autodrome during this period was the wonderful little Austin driven by Murray Jamieson. This time his goal was the Class H 50 kilometres record, held by the M.G. at 105.76 m.p.h., and he put up the figure by the splendid margin of 7.71 m.p.h. to 113.47 m.p.h.

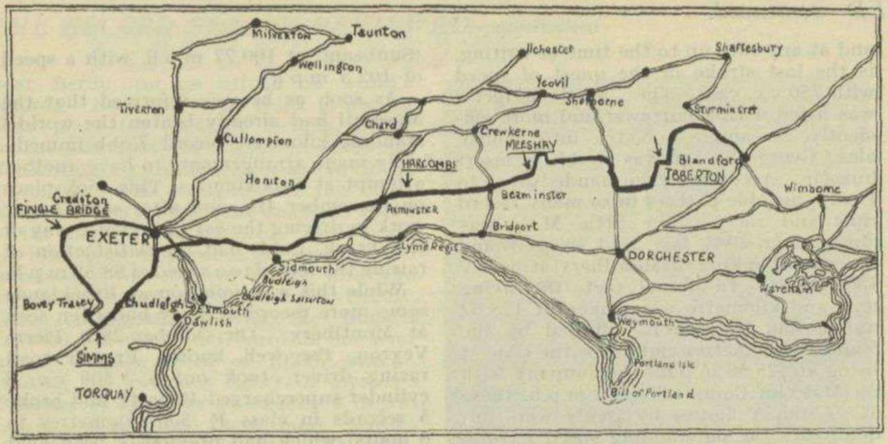
A week later Pierre Veyron appeared once more, this time to try for some shorter records up to one hour. The Bugatti was in magnificent form, and took the 100 miles, the 200 kilometres and the 1 hour at 119 m.p.h. All three had previously stood to the credit of Mrs. Stewart and the Derby-Miller at about 118 m.p.h.

November 20th saw both members of the Eyston-Denly partnership in action at Montlhéry, but this time on different cars. Eyston was due to make an attempt on that greatly coveted world's record, the one hour. It will be remembered that this had been taken from Eyston earlier in the year by Count Czaikowski, at Avus, who had averaged 132.87 m.p.h. with his 4.9 litre Bugatti. Eyston had subjected himself to a vigorous period of physical training for a week or so before the scheduled date, and the old Panhard et Levessor had been fitted with a new all-metal body instead of the wooden affair with which it appeared at Brooklands in 1932. The attack on Czaikowski's hour record failed, for the car had to be withdrawn after 27 minutes with tyre trouble, but in that time Eyston had broken the world's 100 kilometres record and the Class B 50 miles and kilometres and 100 kilometres, at a speed of roughly 134 m.p.h.

On the same day Denly took out the "Magic Midget" in order to regain the 50 kilometres record captured by the Austin three weeks earlier. This he did with a speed of 115.00 m.p.h. and without stopping he carried on for one hour, raising the 50 miles, 100 kilometres and miles, and one hour to 114.46, 113.50, 111.17, and 110.85 m.p.h. respectively.

During September, October and November a regular visitant (one might almost say "resident") of Montlhéry Track had

(Continued on page 136).



THE LONDON TO EXETER.

THE famous End of the Year reliability trial which was held on December 29th and 30th showed no signs of declining popularity, and 272 car entries were received. 27 car teams were nominated.

The trial started from Virginia Water, and the first motor-cyclist leaving at one minute past midnight, with car No. 74 the same number of minutes later. The route ran through Stockbridge and Salisbury to Shaftesbury, where there was a check point. Exeter was reached at 5.50, with an hour's interval refuelling and breakfasting at Deller's Café, and then the serious business of the Trial began.

Fingle Bridge was the first hill, and proved the undoing of many drivers last year. From a standing start one climbs a leaf-covered slope to a deeply rutted hair-pin bend, then up a steeper slope to another hair-pin, this time to the left. The hill continues to wind through a series of sharp bends with an average gradient of about 1 in 5, and this section, which was last year covered with a thick coating of mud, proved the undoing of many overgeared motor-cars. A further section steep and rutted but otherwise not too difficult leads to the summit.

Cars were timed over a short section which includes the first hair-pin, in order to decide ties in the team awards.

The competitors were then led through Bovey Tracey to Ilsington, where Simms Hill, a newcomer on the Exeter programme, was situated.

The gradient of this hill, which is about 1 in 3, makes it a very severe test, and when the surface has had much rain on it proves almost impossible for motor vehicles. There are two bends on it, the second one sharp but reasonably wide.

Following the usual route past Countess Weir, competitors entered Dorset, and were next confronted with Harcombe Hill. This is a steep ascent with several bends and muddy at the top, so that drivers who were keeping their foot down had to watch out for the stop and restart section. The front wheels had to be brought to rest within two lines 6 feet apart, and then from a standing start had to cover 15 yards in seven seconds and finish the climb non-stop.

Meerhay is a long climb overhung with trees, and always seems particularly eerie when climbed by the light of the headlamps. Near the top there is a rocky outcrop which occasionally takes toll of cars which keep too far to the left, but the general gradient is not steep enough to form a serious obstacle.

Ibberton, the final hill of the trial, has two sharp and narrow left and right hand turns near the start, and if too much speed is lost in negotiating them, the 1 in 4 section which follows is apt to prove too much for an underpowered car. The surface is chalky in character, easy under frosty conditions, but liable to become slippery after heavy rain.

The Trial ended, as in 1933 at the Crown Hotel, Blandford. Proper arrangements had been made for the reception of competitors, and hot meals were available all the afternoon.

Fixtures of the other events organised by the Motor Cycle Club are now available. It will be noticed that owing to the early date of Easter this year, the Land's End Trial takes place at the end of March, so competitors beware !

London-Land's End Trial, March 30th and 31st.

London-Edinburgh Trial, May 18th and 19th.

Reliability Trial, July 6th and 7th.

Brooklands Meeting, September 8th.

Sporting Trial, October 13th.

London-Exeter Trial, December 28th and 29th.

G. E. T. EYSTON'S NEW POSITION.

WE learn with great interest that Mr. George Eyston has become a director of Messrs. Jarvis & Sons, Ltd., Wimbledon, the well-known M.G. distributors and tuning specialists.

Eyston has for a long time been a close friend of Mr. J. A. Palmes, the Managing Director of the company, but it is not generally known that they both rowed for Trinity at Cambridge in 1919 and 1920. The original "Magic Midget" was, of course, owned by Palmes, and it was this connection that led to Eyston becoming the M.G. record-breaker.

This new post will not in any way detract from his indefatigable record breaking activity, and there are already rumours of his making a wholesale attack on all the records in a certain class in the New Year.

THE RECORD SEASON REVIEWED—(continued from page 135).

been Freddie Zehender, driving a single-seater 3 litre Maserati. It was rumoured that he intended to have a shot at the world's hour record, but he seemed content to put in a lot of practice at a speed of anything up to 130 m.p.h. At last on November 23rd he announced his intention of breaking records, and in the space of three-quarters of an hour he annexed four records in Class D at a speed of from 130 to 132 m.p.h. These had been held by Divo's Bugatti at some 2 or 3 m.p.h. slower.

Eyston and Maclure set out on November 25th with the streamlined 6 cylinder Riley in opposition to Veyron's Bugatti records. They beat three of them, the 500 miles and kilometres, and the 3 hours, at 110.53, 112.37 and 112.42 m.p.h. respectively.

Finally, de Gabardie and Duray got going under appalling conditions at Montlhéry with the intention of annexing long distance records in Class G. The weather was bitterly cold, but the drivers persevered and completed their scheduled 24 hours run. Their "bag" consisted of 5 records made by the "L" type M.G. Magna earlier in the year, and their speed for 24 hours was 85.05 m.p.h.

This then, is the history of the records broken during the year 1933—at the time of writing. But so diligent are those who carry out this high speed work that it is possible in the few days left of this year that some fresh figures may be set up.

H.N.

WINTER WORK IN THE GARAGE

Now is the time to carry out an overhaul of your car, and in the following article will be found some useful information as to the best means of setting about the work.

THE philosophers who write in the daily newspapers at this time of year are constantly telling us of the advantages of winter, as being a time to improve our minds while yet keeping our bodies in good condition. Not many of these gentlemen, one would fancy, are the owners of sports cars, but the same reasoning applies. Instead of facing the icy or watery blasts which are reputed, not without reason, to make "Grey Englishmen," two or three week-ends spent in getting to know the inside of the motor-car will be repaid by added enjoyment later on.

Tools and Tackle.

The examination of engine and chassis is not a difficult matter, and can be carried out with simple tools and tackle. For the first, a set of fixed-jaw spanners of good quality, such as the B.S.A. series, will be required, and there ought to be a complete set provided with the car, which can be used for dealing with the other end of stiff bolts. Substantial box spanners are also worth having, and the thin fixed spanners made by Terry's are often useful for reaching inaccessible nuts. Pliers, adjustable spanners and a hammer form part of every tool kit, but two or three screwdrivers with blades of different lengths and widths are worth having. Some bastard-cut and smooth files, and a supply of grinding powder, jointing compound and emery cloth complete the list.

A work-bench can be constructed on a framing of 4 by 4 inch timbers, with a top of one inch boarding, a convenient height being about 36 inches. A vice with a jaw-opening of six or more inches will be needed, and this should be fitted over the right-hand leg of the bench, so as to transmit any strains put on to it direct to the floor.

Several wooden boxes for holding large engine parts and some tins for the smaller items will be required, and it is wise to have at hand an assortment of Whitworth and B.S.F. nuts and bolts, with suitable spring and plain washers, also split pins, in case any of these items are damaged when taking down the car. A spare cylinder-head gasket and also a couple of valves and some valve-springs should be obtained before operations begin.

The Garage.

In order to work comfortably in a garage, some form of heating is almost essential, and the tall paraffin stoves, or of course an electric fire if there is a power-plug available, are very handy. On a concrete floor it is wise to stand on the lid of an old packing case, or even to construct a "duck-board" to go in front of the bench.

The first component to be dealt with in an overhaul is the engine. If the cylinder block has been removed within, say, the last 5,000 miles, it should not be necessary to do more than remove the head and decarbonise it, but if the car has undergone a season's work with nothing more than "top overhauls," and in any case if the car can be spared for a sufficient time, an examination of the pistons and big-ends should be made.

Whichever course is decided upon, the first step is to drain the radiator. The carburetters will usually be left in place, but all controls and petrol pipes have to be detached, and also exhaust pipes, plug leads and the top radiator connection. In the case of overhead-camshaft units the maker's instruction book should be consulted to find out whether there is any method of ensuring that the timing shall not slip when the drive is detached.

Dismantling the Engine.

Most modern engines have a sprocket which can only be secured to the camshaft in one position and which is held in contact with the timing chain by a stirrup, but otherwise it will be necessary to mark sprocket and chain links with white paint, and to put a length of wire through the chain before detaching it, to prevent it falling into the depths of the crank-case. Marking will also be necessary with shaft-driven camshafts if the driving gears have to be unmeshed.

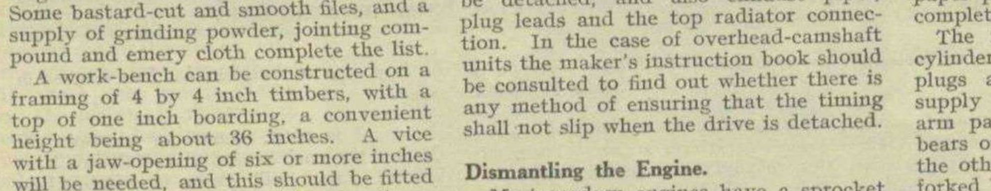
Th instruction book is or should be useful to find out which are the nuts of the cylinder holding-down bolts, for on an O.H.V. engine some of these appear to be used simply for securing the rocker-standards, and their real use not suspected until efforts to lift the head have failed. On Alvis and Meadow engines the water is led from the cylinder block to the head by aluminium ducts at each end, and these also must be taken off.

The Head and Valve gear.

The head can be raised from the cylinder-block by inserting screwdrivers on both sides and levering up evenly, but they should not be forced in too far, otherwise the gasket may be damaged. On many engines lugs are left on the castings, and are bevelled to make it easy to insert the wedges. A head which is difficult to move may often be shifted by turning the engine round slowly with the starting handle. The head should then be lifted off its studs and placed on the bench. The cylinder bores should be blocked with pieces of soft rag to prevent dirt getting down, and a sheet of brown paper pressed down over the studs will complete the protection.

The first step in dealing with the cylinder-head is to remove the sparking plugs and the valves. Some makers supply a valve extractor in which one arm passes through the plug hole and bears on the bottom of the valve, while the other arm is hinged to it and has a forked end which depresses the valve spring cap, and allows the valve cotters or collets to be taken out. If a valve extractor is not used, one has to put on the bench a cotton reel, a nut or any other small object of the correct size to support the valve-head, and to depress the spring cap with an open-jawed spanner, and at the same time fish with a piece of wire to remove the cotters. If the spanner slips, as it probably will do, the cotters will be shot across the garage and will take some time to find, so the extractor is to be recommended if one is at all short-tempered.

The inlet valves should be a good fit in their guides, otherwise air-leaks will occur, weakening the mixture and making starting difficult. If the valves are difficult to remove, in the case of the inlets, this may be due to using low-grade fuel, which will leave a gummy deposit, or from burring-over of the cotter holes used for the square type of cotter, in which case the stem will need to be filed. Alternately the valve may be bent, either through hitting the piston through over-revving, or by being distorted



The first stage. General view of the cylinder head after removal, show'ng the various components. The engine in this case is the M.G. Midget J.2.

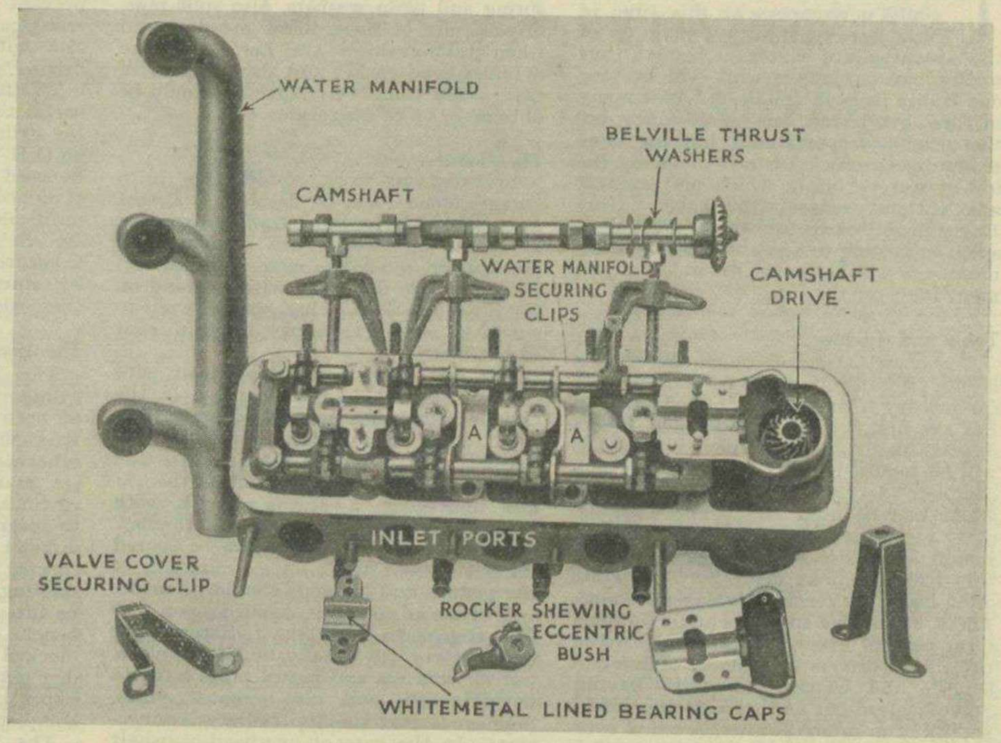
WINTER WORK IN THE GARAGE—continued.

by heat in the case of the exhaust valve. In any case, bent valves should be replaced.

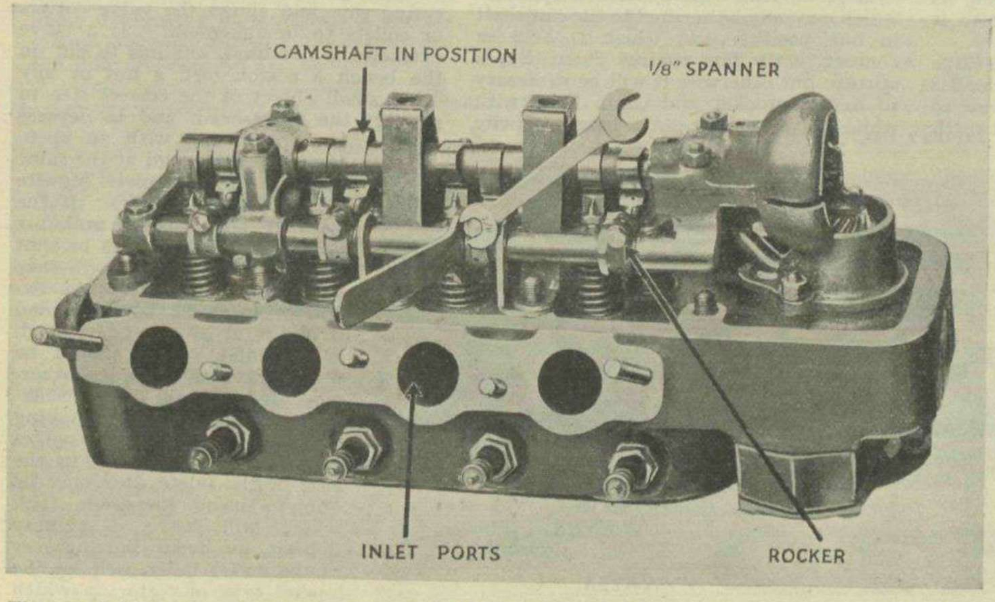
Valve heads are usually stamped with numbers indicating their position in the engine, but if this is not so the valves should be arranged in a drilled and numbered block of wood. The tension of the springs which have been removed should be compared with a set that have not been used, and weak ones replaced.

Decarbonising the cylinder-head presents no difficulty, though everyone has their own idea as to the best tool to use. An old knife or a blunt screwdriver serves very well, and scrapers specially made for the purpose can also be bought. Care must be taken to clean thoroughly the surface against which the gasket beds, again with a blunt instrument so as not to scratch the smooth face of the metal.

If the valve face and its seating in the cylinder-head are badly pitted, they should be re-faced, an operation which is best carried out by a garage, as it will not pay the private owner to acquire the special cutting tools only to use them once. The valve and its seating must be smeared with one of the valve-grinding compounds sold for the purpose, and rotated backwards and forwards over a small arc a few times, and turned to a new position. If no special tool is provided in the tool-kit, a hand-vice is useful for gripping the stem. On wiping off the compound, a polished ring, which is the sign of a good seal, will appear, and the final touches may be given with a fine paste if two varieties are included in the tin. All traces of the abrasize must be carefully removed from valve and seating with a petrol-soaked rag.


WATER MANIFOLD
BELVILLE THRUST WASHERS
CAMSHAFT
WATER MANIFOLD SECURING CLIPS
CAMSHAFT DRIVE
A
A
INLET PORTS
VALVE COVER SECURING CLIP
ROCKER SHEWING ECCENTRIC BUSH
WHITEMETAL LINED BEARING CAPS

This photograph also of a J.2. M.C. Midget, shows the cylinder head after the camshaft has been removed in order to reach the valves.



The method of adjusting valve clearances varies with different engines. Here is the system employed on the J.2. M.G. Midget, an overhead camshaft unit.

After the grinding-in operation has been completed, the valves and their springs may be replaced in the head. Stiff springs may be compressed in the vice, after first threading through them three pieces of strong string. These are tied tightly and the springs, caps and cotters can be replaced in comfort. String is better than wire in this connection, as it can be cut with a knife blade, and if a piece gets left inside the spring, it can do no harm.

The sparking plugs should now be taken to pieces and cleaned. Soaking in petrol, or, in the case of engines in which caster base oil is used, benzol or alcohol will loosen the carbon and a scratch-brush or emery paper will clean up a porcelain insulator like new. A soft cloth is better on mica insulators. Re-assemble the plugs and set gaps to 15-18 thousandths for magneto and 28 for coil ignition.

This completes the attention to the cylinder-head, which may be laid aside until the next operation is carried out, or replaced if it is decided not to go further with the engine overhaul.

The next move varies according to the type of engine. If the cylinder block and crankcase are cast in one unit, the sump will have to be dropped and the bottom half of the big-ends removed before the pistons see the light of day. With a detachable cylinder block, matters are much simpler.

If the valves are push-rod operated, the rods should be removed and stored in the order in which they were fitted in the engine, as their lengths may vary slightly. The cups should be examined to see if there is any sign of flaw in the case-hardening. The lower water connections from the radiator have to be taken off, and after removing the nuts of the crank case studs the block should come away easily.

WINTER WORK IN THE GARAGE—continued.

Assistance at this point is almost essential, and an overhead tackle, particularly the chain-type which does not run back when the down-haul is released, is a great help with a heavy engine. One member of the crew then lifts the block as steadily as possible while his partner steadies the pistons and prevents them striking the side of the crank-case when they emerge from their bores.

Pistons and Bearings.

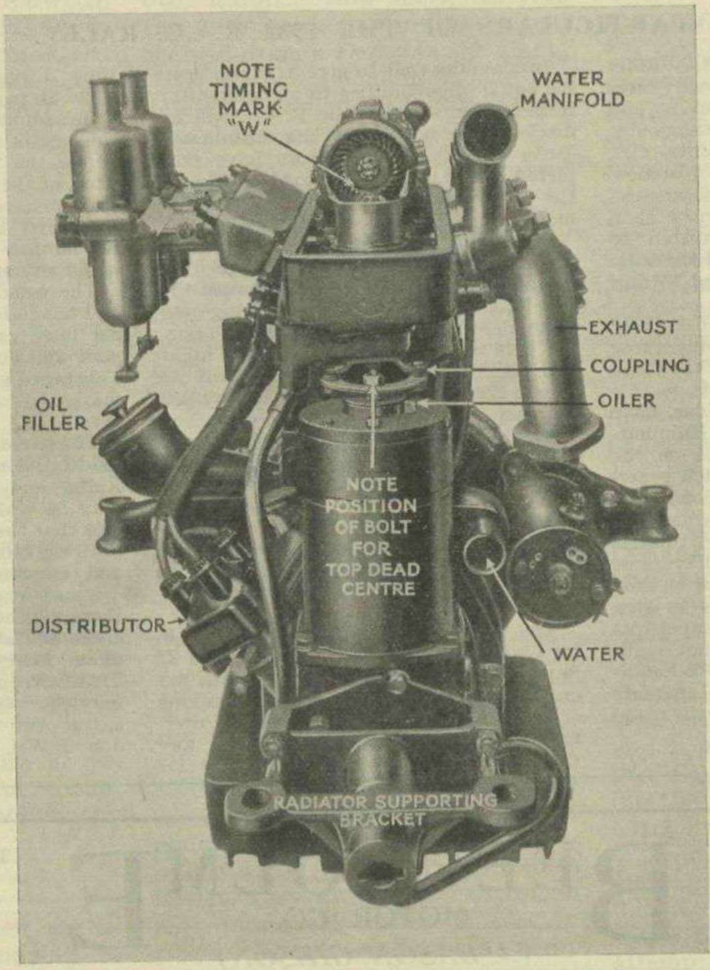
Gudgeon pins may be secured in a variety of ways, usually by spring rings which prevent them moving sideways in the piston webs. Quite often they float both in the small end and in the piston, and are prevented from wearing the cylinder bores by a pad of aluminium at each end. If there is any sign of scoring on the cylinder-wall it means that the pads are not working properly and must be changed.

The pistons should be removed from the connecting rods after marking them to show which cylinder they belong to. and which way round they were fitted. The carbon inside the crown should be scraped out and the top will naturally also be cleaned, taking care not to scratch the soft alloy.

The piston-rings should be free in their grooves, without any up-and-down movement. The rings should be removed by sliding them over three strips of tin equally spaced round the piston, and the grooves freed of carbon. If there are brown stains on the piston, it shows that compression has been escaping, and if new rings do not effect a cure, for maximum efficiency the engine should be re-bored. It is important when fitting new rings to see that there us a clearance between the ends, which should be about 10/1000 inch on a 3-inch piston, otherwise they will touch when the engine gets hot, and seizure will occur.

The condition of the big-ends can be determined by taking hold of the connecting-rods. A little side-play is permissible, but there should be no up and down movement. If there is, the big-ends require attention before complete failure takes place.

The cylinder-bores should now be examined. They should have a high polish, though floating gudgeon pins often mark them slightly without any loss of efficiency. Severe gudgeon-pin scoring should be built up by one of the welding firms who specialise in this repair, while deep cuts may necessitate re-boring. Sometimes one finds traces of aluminium, the result of a temporary seizure, and the corresponding high-spots on the piston should be taken down with a smooth file.



Care should be taken when dismantling an engine lest the valve timing be disturbed. In this M.G. Midget engine the camshaft bevel is marked, and the position of the bolt on the vertical drive coupling should be noted.

If it is necessary to take out the engine to attend to the big-ends or main bearings, this should be done while the head and block are not in place, since without their weight it is much easier to handle. On a few engines it is even difficult to remove the sump easily unless the bolts of the engine bearers are slacked off and the crank-case slightly raised, so the same thing applies.

The sump is usually secured on a number of studs, and a few shrewd blows with the shaft of a hammer may be needed to shift it. Care should be taken to avoid damaging the gasket, if one is fitted, though a replacement can be made from strong brown paper. The oil of course should be drained out before dropping the sump.

Cleaning the Sump.

Before cleaning and washing out the base-chamber, the contents should be examined for water, which points to a bad cylinder-head gasket or a minute crack in the cylinder wall, and for fragments of bearing metal. Paraffin and a stiff brush may be used for cleaning the sump and the various filters, but petrol is to be preferred, as it evaporates, so that there is no chance of any being left to contaminate the new oil when the sump is refilled.

Reassembly.

Where the cylinder-block is cast in one with the crank-case, the pistons can only be withdrawn after the sump has been dropped and the bottom half of the big-ends taken off. The bearing shells are stamped with the numbers of their cylinders, and should be stored carefully with the bolts and their respective shims or thin washers, so that the whole assembly can be replaced exactly as before. The pistons are normally withdrawn from the block in an upward direction, as oil baffles and other obstructions are likely to prevent them being removed downwards. They should then be examined and decarbonised as already described.

The condition of the big-ends should be noted. Correctly fitted ones have a dull, often greenish, sheen, while if they are discoloured or have isolated bright spots, they probably require attention. Taking up bearings is not a job to be tackled by the inexperienced owner, and if they need to be dealt with, one would be well advised to have it done by one of the firms who specialise in sports car tuning.

Big-end bolts sometimes stretch, which can be detected by their threads having a jagged appearance, and if this is the case, they should be replaced. Bolts of high-tensile steel are needed for this position, and the makers of the car will have suitable ones in stock. The nuts should be tightened really firmly, and the rods should have no shake on the crank-pins, but should be quite free. Any locking devices must be put back.

Before replacing the pistons, the gaps in the piston rings should be spaced out evenly, and engine oil should be put on the cylinder walls. No difficulty will be experienced in putting back the sump, but the faces should be clean, and the washer may be coated with L'Hermeticol or a similar jointing compound if it is found that this was done originally.

When putting back the cylinder block, the crank-case should be turned so that two of the pistons are at the top of their stroke, and the rings compressed so that the pistons can enter their bores. There are on the market special collapsible bands which can be pushed over the rings and which slide down as the pistons are inserted. The block can then be lowered slightly and the other pistons guided in.

WINTER WORK IN THE GARAGE—continued.

Needless to say, a non-reversible pulley tackle is a great convenience in replacing a heavy block.

The cylinder-block holding down bolts need to be tightened down evenly, starting, say, with the end ones diagonally opposite one another and working to the middle. The lower water connections will need to be put back, and in this connection one can recommend the Jubilee radiator clips, with which secure joints can be made even if the water-hose is not an exact fit on the metal stubs.

A copper and asbestos gasket is generally used for the cylinder-head joint, and if it has been taken off without being damaged, it may be used again. Even a slight cut made by a screwdriver in prising up the head may weaken it, however, and a new one should be used. These gaskets are put on dry, or sometimes smeared with grease or oil. Klingerite gaskets, made of a woven material, are now used on many cars with success, while a copper washer is usual on racing cars. These may be used almost indefinitely, but may need annealing by heating over a gas ring and plunging into cold water. Care must be taken to bolt down the cylinder-head carefully, otherwise it may be warped, and the maker's instruction on them gives specific instructions as to the order in which this should be carried out.

After the various water pipes and oil pipes, if any, have been replaced, there only remains to reconnect the camshaft drive, or to put back the push-rods, according to the type of engine. A strong screw-driver to lever up the rockers is indicated in the latter case. The tappet clearances then need to be checked over, and should not need much alteration if the pushrods are put back in their original positions.

Ball-ended rockers with flats on them, such as were used on the old-type Bentley engines, may be deceptive if the flats are not registering with the valves.

After filling up with oil and water, and re-connecting controls, exhaust pipes and other exterior fittings, the engine should be started and run for a few minutes, keeping an eye on the oil-pressure guage in case the pump has become air-locked. The engine should then be stopped, and the cylinder head bolts tightened, and after this has been repeated, the tappets will probably need a final adjustment. Final attention to water and other joints may also be indicated, and this completes the engine overhaul. A further article dealing with the engine accessories and the chassis will be given in next month's issue.

PARTICULARS OF THE 1934 R.A.C. RALLY.

Particulars of the 1934 R.A.C. Rally are now available. The Rally will take place on 13th-17th March, and the finishing point will be Bournemouth. There will be nine starting points, viz., London, Leamington, Bath, Norwich, Buxton, Harrogate, Liverpool, Newcastle-on-Tyne and Glasgow. Not more than 100 competitors will be permitted to start from any one control, and the total number of entries will be limited to four hundred.

A Coachwork Competition will be held on the last day of the Rally, only those competitors who have completed the Road Section being eligible to compete.

Hitherto the Rally Regulations have contained full particulars of the Eliminating Tests which are carried out on the fourth day of the Rally, and which generally serve to decide the destination of the numerous awards. As a consequence competitors have had unlimited opportunities not only for practising for the various tests, but in many cases to adapt or tune their cars in such a manner as to give them an advantage over other competitors to whom such opportunities are not available. The effect of this has been to handicap to some extent the private entrants in the Rally in competition with the trade entries.

In an endeavour to give as far as possible equal opportunities to all competitors in next year's Rally, the R.A.C. will not disclose the nature of the Eliminating Tests until the competitors have completed the 1,000 Miles Road Section of the Rally and have arrived at Bournemouth.

On arrival on Thursday, 15th March, therefore, the cars will be examined for condition in the usual way; competitors will then be handed a paper giving complete details of the Eliminating Tests; the cars will be locked up for the night, and on the following morning will be driven through the tests without any preliminary practice.

The cars are divided into three categories, according to R.A.C. horse power rating. These are :—Cars over 16 h.p., cars over 10 h.p. up to 16 h.p., and cars up to 10 h.p. The entry fee is £3 3s., except where the entrant is a member of the R.A.C. or its associated clubs, when it will be £2 2s. Entries close 5th February, 1934.

The average speeds will be 26 m.p.h. for Class I, 24 h.p.h. for Class II, and 22 m.p.h. for Class III. Competitors are credited with 200 marks at the beginning of the Rally, and may report at intermediate Controls on their route at any time during the period of its opening without penalty. At the final control at Bournemouth, marks will be deducted in the case of arrival more than five minutes before the time allotted to each competitor, at the rate of two marks per minute, and for late arrival more than ten minutes after the scheduled time one mark per minute will be deducted, with a limit of 60 minutes late.

The usual Route Book will be carried and has to be stamped at controls. Every car must carry a minimum of 2 passengers, and no driver may drive the car for a distance greater than 700 miles. Bonus marks are not awarded for extra passengers.

The size of wheels, tyres, gear and back-axle ratios may not be varied during the Rally, and the engine and carburettors may be sealed. This regulation and the fact that the final tests will be kept secret until the afternoon of arrival will put trade and amateur on a more equal footing.

Apart from the three Premier Trophies, there will be five additional ones in each class, and also Manufacturers' and Clubs' Team Prizes.

The Regulations of the R.A.C. Rally may be obtained from the Secretary, Royal Automobile Club, Pall Mall, London, S.W.1.

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HERE AND THERE

Mr. Percy Northey Retires.

AFTER having worked for the Rolls-Royce Company for a period of 26 years, Mr. Percy Northey has retired at the end of 1933. Mr. Northey will continue to work in the interests of the company privately, and he will also be available in an advisory capacity.

Whitney Straight, Ltd.

The Company formed by Whitney Straight which will operate four Maseratis on the continent next season, is now settled with registered offices at Bush House, Aldwych, London. An interesting addition to the personnel of the concern is Mr. Lambert, the Secretary, who acted for many years in that capacity for the late Sir Henry Birkin.

A Remarkable Debut.

Few drivers, of either sex, have made such a successful début in reliability trials as Miss Doreen Evans. In the spring of 1933 on her seventeenth birthday, she was presented with a J.2 Midget by her father. Up till that time, of course, she could not drive, but she soon learnt, assisted no doubt by her brothers Denis and Kenneth, both of whom are well known M.G. drivers.

Miss Evans promptly entered for trials, and has so far competed in six. In every case she has gained a Premier Award, and her crowning success was to win the Ladies' Cup in the recent London to Gloucester, being among the select 21 out of 190 to lose no marks.

In her first year of driving she has become the most successful woman driver in trials, an extraordinarily fine achievement.

John Cobb's New Car.

John Cobb has acquired the 2-seater Alfa Romeo belonging to Noel Rees, and raced by the Hon. Brian Lewis during 1933. Cobb, of course, has devoted himself almost exclusively to track work since the beginning of his racing career. On one occasion he drove a Riley Nine in the T.T., and it is interesting to speculate on his probable participation in road races during the coming season.

On the other hand, the Alfa Romeo is perfectly suitable for track-racing, and should be capable of lapping Brooklands at a very high speed. The early long chassis "2.3" Alfa owned by the late Sir Henry Birkin once covered a lap at well over 125 m.p.h.

Mrs. Stewart's New Activities.

Since she deserted motor-cycles for cars, Mrs. Gwenda Stewart has confined herself to record breaking at Montlhéry, and to prolonged road tests of new Derby models all over Europe. Now she is carrying this latter work a stage further, and she will drive a Derby in the Monte Carlo Rally. In addition, she has entered a similar car for the Grand Prix d'Endurance at Le Mans.

Racing on a Frozen Lake.

The German Automobile Club (D.D.A.C.) is handling arrangements for the first time of the popular International Motor Races on the frozen Lake Titisee, near Freiburg, Black Forest. The meeting, at which aeroplanes, racing cars, and motor-cycles will race against each other, will be held on February 4th. It is hoped that British drivers will compete.

Conditions and entry forms are available from the D.D.A.C., Kaiserstrasse 41, Freiburg, Baden.

Unrest on the Continent.

There has been a good deal of dissatisfaction expressed this winter among the lesser known Continental drivers. The trouble is that during 1933 the system of running road races with selected fields has become almost universal.

The drivers say, that as licence-holders they are entitled to run in any race held under A.I.A.C.R. rules. They say that in many cases the organisers do not encourage the 1,500 c.c. category, and that they should not be excluded just because they have not the experience of a Chiron. In any case, they add, how are they to gain experience if their entries are always refused ?

The organisers' argument is that only a certain number of cars can run in a race, and to ensure an adequate gate to pay expenses they are forced to limit the entries to the finest and most renowned drivers. English drivers, incidentally, even though inexperienced, are always welcome because they give the race an international flavour.

A suggestion has been put forward by the French newspaper "L'Auto" that special races for beginners and second-class drivers should be held, either as preliminaries to real Grand Prix events, or as separate races.

A Coveted Record.

A record which ranks among the most sought-after achievements in motoring is that for the one hour, and this record is likely to be the subject of serious onslaughts during the coming season.

The One Hour is held by the late Count Czaikowski's 4.9 Bugatti, at 132.87 m.p.h. but G. E. T. Eyston has hopes of improving on this figure shortly with the 8 litre Panhard et Levassor. A brief history of the record since the War is not without interest. The first man to beat Chassagne's old record was the late J. G. Parry Thomas, who averaged 109.727 for one hour at Brooklands on November 17th, 1924, with his Leyland-Thomas. On July 14th, 1925, he raised this to 111.34 m.p.h. with the same car on the same track.

Six weeks later, on August 31st, Charles Ortmans captured the record at Montlhéry at a speed of 116.08 m.p.h., driving the razor-blade 4.8 litre Panhard et Levassor. Following the example of Parry Thomas, Ortmans beat his own record in the following Spring, on March 25th, 1926. This time he used the same 8 litre Panhard et Leavssor with which Eyston is shortly to make an attempt, and his speed was 120.942 m.p.h. Once again Parry Thomas retaliated, and on October 21st, 1926, he averaged 122.453 m.p.h. at Brooklands.

Then a new comer arrived on the scene, E. A. D. Eldridge, driving a very different car. His mount was a 2 litre Miller, and on December 31st, 1926, Eldridge took the record

(Continued at foot of following page.)

Last Minute News of the Monte Carlo Rally.

TRUE to the traditions of motoring events, a great rush of entries for the Rally came in on the eve of the closing date, and the time limit was extended to ensure that no last-minute nominations should be missed. As a result the organisers expect a record entry of about 140.

Below is given the last official list available, together with some further names the particulars of which are not yet definite.

Lord De Clifford and his companions drove down to Brindisi and took ship to Athens, as had been arranged. They were able to get as far as the Bulgarian frontier, and found that it was possible almost to maintain the average of 25 m.p.h. required over the worst section of the roads.

The route through Bulgaria is said to possess a better surface, and it should be possible to regain lost time on this part. The British drivers starting from Athens are all experienced Rally competitors and should give a good account of themselves.

The latest entries :—
No. 62 E. May, Ford.
63 E. A. Chazel, Peugeot (A.).
64 M. Jaurey, Delage.
65 J. C. S. Nyenbanding de Boer, Ford.
66 R. C. Porter, André V6 (J.).
76 P. J. Glerum, Ford.
68 J. Blaivie, Pontiac.
69 Major C. Montague-Johnstone, Triumph (J.).
70. C. B. E. Morgan, Vale Special (J.).
71 Miss Labouchere, Singer.
72 Mlle. J. Darre, Chrysler (S.).
73 Per Bergan, Austin (S.).
74 Mrs. G. Molander, Plymouth (U.).
75 J. A. G. Howarth, Riley.
76 C. J. Kingsley Scott, Triumph (S.).
77 M. Accarie, Amilcar.
78 W. H. Vroom, Ford.
79 Mrs. G. M. Stewart, Derby.
80 A. L. Costerhins, Citroen.
81 Dr. A. G. M. Verbeek, Ford.
82 J. C. C. Baron Taets von Amerongen, Dodge.
83 F. H. Winter, Alvis (J.).
84 A. Zimmerman, Auburn (T.).
85 J. H. Whalley, Ford (A.).
86 Miss E. M. Riddell, A.C.
87 L. Martin, Talbot (J.).
88 R. Mathi Dumaine, Essex Terraplane.
89 E. A. C. Cornelius, D.K.W.
90 F. Leblanc, Citroen.
91 R. Zetterlund, Ford.
92 L. Fallai, Ford.
93 F. Eck, Ford.
94 C. Schade, Wolseley.
95 J. Formanek, Aero.
96 B. Turek, Aero.
97 K. Talsky, Praga.
98 Miss R. M. Harker, Sunbeam.
99 A. C. Scott, Bentley.
100 H. Knapp, Walter.
101 Mme. L. Schell and L. Schell Delahaye.
102 S. H. Light, Standard.
103 Cdt. A. Berlesco, Ford.
104 L. Gondard, Citroen.
105 Ch. de Cortanze, Peugeot.
106 Miss L. L. Dillon, Fiat.
107 P. Bussienne, Mathies.
108 E. de Vlugt, Ford.
109 W. Zweerts de Jong, Auburn.
110 Malaret and Lavillaugonet, Talbot.
111 H. R. G. Howard, M.G.
112 G. Malmquist, Chryslef.
113 E. de Lodotschnikoff, Amilcar.
114 J. Vial-D. Porthault, Hotchkiss.
115 Mlle. G. Y. Luzeaux, Citroen.
116 H. Stenfeldt Hansen, Ford.
117 L. Desloge, Peugeot.
118 F. Ginnta, Ford.
119 J. Beck, Junr., Triumph.
120 R. Husem and H. Larsen, Fiat.
121 R. Blanc, Bugatti.
122 M. Matrat, Peugeot.
123 T. V. G. Selby, Chrysler.
124 J. Charters, Lagonda.
125 C. Karlquist, Chevrolet.
126 H. Stoffel, Peugeot.
127 V. Linders, Ford.
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132 C. Graf, Steyr.
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134 W. E. Belgrave and M. T. Lacroze, M.G.
135 W. A. Scott Brown, Alvis.
136 Capt. F. E. Nord, Mercédès-Benz.
137 Ad. Kurz and Rud. Kurz, Steyr.
138 Dona M. de Noronha La Caze, Mathis.
139 Ing. Franashiska, Essex Terraplane.
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142 Gildes Coulthurst Hobroyd, Ford.
143 Lothar Westren and Doll, Chrysler.
144 J. Gauthier, Citroen.
145 Ad. Kegresse, Citroen.
146 Al. Perrot, Delahaye.

A denotes Athens.
J ,, John o'Groats.
S ,, Stavanger.
T ,, Tallinn.
U ,, Umea.

HERE AND THERE—continued from preceding page.

at Montlhéry with a speed of 127.328 m.p.h. Five months later, on May 27th, 1927, César Marchand entered the lists with the 8 litre Voisin, and set up a new mark with a speed of 129.069 m.p.h.

This figure stood for five years, and it was not until April 6th, 1932, that G. E. T. Eyston broke the record with the old 8 litre Panhard et Levassor at a speed of 130.73 m.p.h. Then, on May 5th, 1933, the late Count Czaikowski set up the existing speed of 132.87 m.p.h. at Avus.

Airman's World.

Fast motoring is in many ways akin to flying, and this urge to fly cannot fail to be increased by a fascinating book recently published. The title is "Airman's World," the author is a German named Peter Supf, the publisher is Routledge, and the price is 10s. 6d.

In the text-matter (there are also 103 illustrations), the author sets out to describe, if description is possible of scenes unlike any on earth, of the airman's world, storms, cloud effects, fog, the face of the earth, cities, forests, deserts and seas. At times Supf becomes a little ebullient, and we rather doubt whether many airman have consciously experienced the god-like emotions he describes. In spite of this over-enthusiasm, however, the author has succeeded in bringing home the wonder of flight and the extent of Man's conquest of the unaccustomed element.

The book gains strength enormously by reason of its illustrations, which amplify the writer's verbal pictures without referring to precisely similar scenes to those described in the text. Every one of the 103 aerial photographs is a masterpiece of its kind, and among so much excellence it is difficult to single out individual ones for praise. MOTOR SPORT readers will like the view of Avus Track, while "Modern City," "City by Night," "Tower in Fog," "Shadow of Aeroplane," "Boats on a Lake," "Beer Garden," "Glacier," "Mountain Chain in Mist," and "Worshippers" are magnificent.

NEW RULES FOR R.A.C. "CLOSED" PERMITS

WE have received the following communication from the Royal Automobile Club, which we commend to the attention of all trials competitors and officials.

The R.A.C. has had under consideration the general scope of reliability trials and speed events held in this country. All such events are run under permit from the R.A.C., which is responsible for the control of motoring sport in Great Britain and Northern Ireland.

The large majority of trials and speed events are confined to the members of the organizing clubs, but in certain cases permission is given by the R.A.C. for members of other Automobile Clubs to be invited to participate—naturally with the agreement of the clubs concerned.

A tendency has revealed itself during the past few years for such invitations to be extended very widely, in some cases to all recognized automobile clubs in the country (of which there are between four and five hundred) with the result that the event in question becomes in effect, open to everybody.

It is felt by the R.A.C. that it is not in the best interests of the sport that events of this type—and more particularly reliability trials held on the open road—should be encouraged. The possibility of annoyance to the general public caused by frequent trials with large entries must be considered, and the interference with the normal activities of the various clubs by continuous invitations to participate in outside events is an undesirable feature.

For these reasons, and in the belief that the successful development of a club lies in the attractions of its own programme, the R.A.C. has framed regulations which will govern the issue of permits for closed competitions in 1934. They are as follows :—

RELIABILITY TRIALS. Permits will be issued to clubs for this class of closed competition as heretofore where it is confined solely to members of the promoting club.

A club may apply for one permit each year, with the right to invite the members of five additional clubs to enter the Trial. The consent of the clubs so invited to accompany the application for the permit.

The effect of this restriction will be that no club will be able to run more than one extended trial during any one year, but it may have the opportunity of participating in similar trials if it is invited to do so by other clubs.

TEAM TRIALS. In addition to the above a club may apply for a permit for one inter-club team trial in any one year. Such a trial to be open to any recognized automobile club in this country, only one team to be entered from each club, and the number of members of each team to be not more than six.

SPEED EVENTS. For any form of closed speed event permits may include five other clubs in addition to the promoting club, the consent of such other clubs to accompany the application for the permit. No restriction on the number of such extended permits is proposed, but the Royal Automobile Club, the Brooklands Automobile Racing Club, the British Racing Drivers' Club and the Junior Racing Drivers' Club, will not be considered as clubs eligible for inclusion in such permits.

Steps have also been taken by the R.A.C. to prevent the clashing of competitions both as regards date or venue.

THE BRIGHTON ROAD-CIRCUIT SCHEME

AFTER an interval of eight years, the scheme to construct a road-racing circuit on the South Downs, near Brighton, has been revived. It will be remembered that in 1925 the proposal met with considerable opposition in the district, notably with the members of the Society of Sussex Downsmen. In spite of the efforts of Mr. Hugh McConnell, who was at that time the moving spirit of the scheme, no support could be found for it in those circumstances, and it was indefinitely postponed.

Now that keen sportsman, Mr. C. L. Clayton, Secretary of the Brighton & Hove Motor Club, has resuscitated the scheme and has gained the sanction of the Brighton Corporation for a lease of some 450 acres of land on the Downs. The actual site is bounded by the Dyke Railway line, the Hove Isolation Hospital, and the Dyke golf course and club house. On this land it is proposed to lay out a metalled road the actual length of the circuit. No grandstands will be built, the promoters considering the sloping downs to be ample accommodation for spectators.

Mr. Clayton's plan is that the track will be owned by a private company known as the Brighton Racing Track Syndicate.

So far the scheme is naturally in its early stages. Two difficulties suggest themselves, first, that the Portslade Urban District Council will use their Town Planning authority to dismiss the scheme, and second that they will refuse to maintain the roads leading to the Track. At a recent meeting of the Portslade Council the matter was deferred until more comprehensive plans and proposals were submitted by the promoters.

Further developments will be watched with the interest and good wishes of all who hope that we shall one day have a real road-race circuit in England, suitable for Grand Prix races.

EASY STARTING ON COLD MORNINGS

WRONG oil is one of the commonest causes of troublesome starting in winter-time. A change in the "thickness" or viscosity of the lubricating oil at this time of the year may mean as much to the engine as a change in weight of underwear does to the driver.

On more than a dozen of the best-known British makes of car owners are advised to change to Castrol A.A., a light winter grade, while for several well-known makes a still lighter grade, Castrol C.W., is advised. These two grades will remain fluid at temperatures far below freezing point, and are specially designed to give at the same time efficient lubrication at high working temperatures.

Naturally a lighter oil gives easier starting, but this in itself is no indication of merit. A very easy start could be obtained with paraffin or eucalyptus oil ! The ideal oil is one which gives not only easy starting but protection to the engine at high speeds ; and, in proof of the fact that this is both possible and easy, Castrol C.W. was on one occasion used in a successful attempt on the world's hour record. This oil was also used by Captain G. E. T. Eyston in setting up a world speed record for 100 kilometres in an 8-cylinder Panhard at Montlhéry a few weeks ago.

Draining the crankcase and re-filling with fresh oil is no extravagance. The improvement both in starting and in running more than justifies the cost of the new oil, while on a large number of cars the oil is probably in any case due for replacement.

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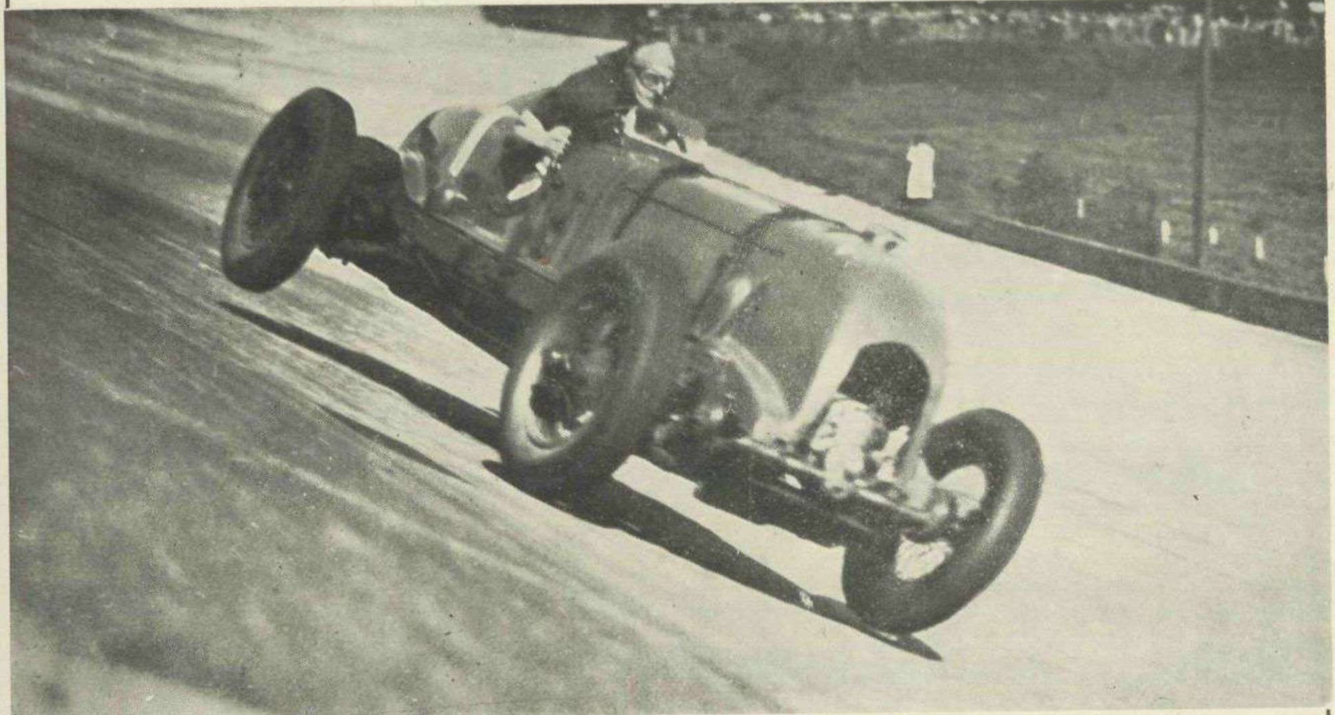

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